DRAGON PHARMACEUTICAL INC
Form 10QSB
September 21, 2005

U.S. Securities and Exchange Commission
Washington, D.C. 20549

Form 10-QSB

[X] QUARTERLY REPORT UNDER SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the quarterly period ended June 30, 2005

OR

[ ] TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES ACT OF 1934

For the transition period from _____ to _____

Commission file number 0-27937

DRAGON PHARMACEUTICAL INC.
(Exact name of small business issuer as specified in its charter)

Florida	65-0142474
(State or other jurisdiction of incorporation or organization)	(IRS Employer Identification No.)

1055 West Hastings Street, Suite 1900
Vancouver, British Columbia
Canada V6E 2E9
(Address of principal executive offices)

(604) 669-8817
(Issuer's telephone number)

(Former address if changed since last report)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes [X] No [ ]

Number of shares of common stock outstanding as of June 30, 2005: 62,878,004

PART I - FINANCIAL INFORMATION

Item 1. Financial Statements

DRAGON PHARMACEUTICAL INC.

AND SUBSIDIARIES
CONSOLIDATED FINANCIAL STATEMENTS
FOR THE QUARTER ENDED JUNE 30, 2005
(UNAUDITED) Expressed in US Dollars

CONTENTS

PAGE	3	CONSOLIDATED BALANCE SHEETS AS AT JUNE 30, 2005 AND DECEMBER 31, 2004
PAGE	4	CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE INCOME FOR THE THREE AND SIX MONTHS ENDED JUNE 30, 2005 AND 2004
PAGE	5	CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY FOR THE PERIODS ENDED JUNE 30, 2005 AND DECEMBER 31, 2004
PAGE	6	CONSOLIDATED STATEMENTS OF CASH FLOWS FOR THE SIX MONTHS ENDED JUNE 30, 2005 AND 2004
PAGES	7 - 31	NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - JUNE 30, 2005

DRAGON PHARMACEUTICAL INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
AS AT JUNE 30, 2005 AND DECEMBER 31, 2004
(UNAUDITED) Expressed in US Dollars

ASSETS

	Note	June 30,
CURRENT ASSETS		
Cash and cash equivalents	18	$ 1,
Accounts receivable, net of allowances	2	8,
Inventories, net	3	17,
Value added tax receivable		
Prepaid expenses		
Total Current Assets		28,
PROPERTY AND EQUIPMENT, NET	4	64,
OTHER ASSETS		
Intangible assets, net	6	2,
Other receivables		1,
Investments -cost		
Total Other Assets		4,

	Note	
TOTAL ASSETS		$ 97,

LIABILITIES AND STOCKHOLDERS' EQUITY

	Note	
CURRENT LIABILITIES		
Accounts payable		$ 4,
Accrued retirement benefits	7	
Other payables and accrued liabilities	8	18,
Notes payable - short-term	9	6,
Due to related companies	11	
Total Current Liabilities		31,
LONG-TERM LIABILITIES		
Long term accounts payable	10	21,
Long term retirement benefits	7	
Notes payable - long-term	9	12,
Due to related companies	11	
Total Long-Term Liabilities		35,
TOTAL LIABILITIES		66,
COMMITMENTS AND CONTINGENCIES (Note 14)		
STOCKHOLDERS' EQUITY		
Authorized: 200,000,000 common shares at par value of $0.001 each		
Issued and outstanding: 62,878,004 (December 31, 2004: 44,502,004) common shares		
Additional paid-in capital		22,
Retained earnings		1,
Reserves		7,
Accumulated other comprehensive (loss)		
Due from stockholder		
Total Stockholders' Equity		30
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY		$ 97

The accompanying notes are an integral part of these consolidated financial statements.

DRAGON PHARMACEUTICAL INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS
AND COMPREHENSIVE INCOME
FOR THE THREE AND SIX MONTHS ENDED JUNE 30, 2005 AND 2004
(UNAUDITED) Expressed in US Dollars

	Note	Three Months Ended June 30, 2005	RESTATED (NOTE 20) Three Months Ended June 30, 2004
NET SALES	12	$ 11,350,909	$ 7,320,949
COST OF SALES		8,169,143	3,284,181
GROSS PROFIT		3,181,766	4,036,768
OPERATING EXPENSES			
Selling expense		1,285,282	1,109,338
General and administrative expenses		1,208,585	165,324
Depreciation and amortization		276,589	82,029
Total Operating Expenses		2,770,456	1,356,691
INCOME FROM OPERATIONS		411,310	2,680,077
OTHER INCOME (EXPENSE)			
Interest expense		(315,568)	(3,689)
Other income		28,416	50,627
Funds Released by Chinese Government Liquidator	13	-	-
Other expense		1,548	(36,231)
Total Other Income (Expenses)		(285,604)	10,707
INCOME FROM OPERATIONS BEFORE TAXES		125,706	2,690,784
INCOME TAX EXPENSE	1(M)	(129,046)	(352,410)
NET INCOME (LOSS)		(3,340)	2,338,374
OTHER COMPREHENSIVE INCOME			
Foreign currency translation loss		(911)	-
COMPREHENSIVE INCOME (LOSS)		$ (4,251)	$ 2,338,374
Earnings per share - basic and diluted	$	0.00	$ 0.05 $
Weighted average number of shares outstanding during the period - basic and diluted		62,878,004	44,502,004

The accompanying notes are an integral part of these consolidated financial statements.

DRAGON PHARMACEUTICAL INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENT OF STOCKHOLDERS' EQUITY
FOR THE PERIODS ENDED JUNE 30, 2005 AND DECEMBER 31, 2004
(UNAUDITED) Expressed in US Dollars

	Common Stock		Additional Paid-In	Retained		Ac oth hen
	Shares	Amount	Capital	Earnings	Reserves	
Balance, December 31, 2003, adjusted for the effect of recapitalization of reverse acquisition (Note 5(B))	44,502,004	44,502	$ 7,841,363	$ 6,054,864	$1,286,784	$
Registered capital appropriation	-	-	6,141,639	(6,141,639)	-	
Notes receivable - stockholders	-	-	-	-	-	
Net income for the year ended December 31, 2004	-	-	-	6,362,423	-	
Transfer from retained earnings for appropriated statutory and staff welfare reserves	-	-	-	(6,275,648)	6,275,648	
Balance, December 31, 2004	44,502,004	$ 44,502	13,983,002	-	7,562,432	
Reverse acquisition (Note 5(B))	18,376,000	18,376	5,740,370	-	-	
Related party debt exchanged for equity	-	-	2,415,458	-	-	
Notes receivable - stockholders	-	-	-	-	-	
Comprehensive income (loss) - foreign currency translation	-	-	-	-	-	
(911) -	(911)					
Net income for the six months ended June 30, 2005	-	-	-	1,237,416	-	
Balance, June 30, 2005	62,878,004	$ 62,878	$ 22,138,830	$ 1,237,416	$7,562,432	

The accompanying notes are an integral part of these consolidated financial statements.

5

DRAGON PHARMACEUTICAL INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
FOR THE SIX MONTHS ENDED JUNE 30, 2005 AND 2004
(UNAUDITED) Expressed in US Dollars

CASH FLOWS FROM OPERATING ACTIVITIES:
Net income $
Adjustments to reconcile net income to net cash provided by (used in) operating activities:
Depreciation and amortization
Allowance for doubtful accounts
Provision for (recovery from) obsolete inventories
Funds Released by Chinese Government Liquidator(Note 13)
Changes in operating assets and liabilities, net of effect of reverse acquisition (Note 5(B)), (increase) decrease in:
Accounts receivable
Inventories
Value added tax receivable
Prepaid expenses
Other assets
Deposits
Increase (decrease) in:
Accounts payable
Other payables and accrued expenses

Net Cash Provided By (Used In) Operating Activities

CASH FLOWS FROM INVESTING ACTIVITIES:
Purchase of property and equipment
Cash acquired in connection with reverse acquisition (Note 5(B))

Net Cash Provided By (Used In) Investing Activities

CASH FLOWS FROM FINANCING ACTIVITIES:
Proceeds from notes payable
Due to related companies
Due from stockholder

Net Cash Provided By (Used In) Financing Activities

(GAIN) LOSS ON CASH HELD IN FOREIGN CURRENCY

NET INCREASE IN CASH AND CASH EQUIVALENTS

CASH AND CASH EQUIVALENTS AT BEGINNING OF PERIOD

CASH AND CASH EQUIVALENTS AT END OF PERIOD $

Cash paid during the period for interest expense $

Cash paid during the period for income taxes $

SUPPLEMENTAL DISCLOSURE OF NON-CASH INVESTING AND FINANCING ACTIVITIES:
During March 2005, $2,415,458 of loans payable to an entity related to a director of the Company was converted into equity of the Company.

The accompanying notes are an integral part of these consolidated financial statements.

DRAGON PHARMACEUTICAL INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
AS OF JUNE 30, 2005 AND DECEMBER 31, 2004
(UNAUDITED) Expressed in US Dollars

NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES AND ORGANIZATION

(A) Organization and Basis of Presentation

Pursuant to a share purchase agreement, dated June 11, 2004, Dragon Pharmaceutical Inc. (the "Company") acquired 100% of the issued and outstanding shares of Oriental Wave Holding Limited ("Oriental Wave") by issuing 44,502,004 common shares of the Company. This transaction was completed on January 12, 2005 and has been accounted for as a reverse acquisition (See Note 5(B)). Accounting principles applicable to reverse acquisition has been applied to record the acquisition. Under this basis of accounting, Oriental Wave is the acquirer and, accordingly, the consolidated entity is considered to be a continuation of Oriental Wave with the net assets of the Company deemed to have been acquired and recorded at its fair market value. The Statement of operations includes the results of Oriental Wave for the six months ended June 30, 2005 and those of the Company from January 13 to June 30, 2005.

Oriental Wave was incorporated in the British Virgin Islands on January 7, 2003. Shanxi Weiqida Pharmaceutical Company Limited ("Shanxi Weiqida"), a People's Republic of China limited liability company was incorporated on January 22, 2002. Shanxi Weiqida is principally engaged in research and development, manufacturing, and selling of pharmaceutical products in the People's Republic of China ("PRC").

During 2003, Shanxi Weiqida's shareholders exchanged 100% of their ownership of Shanxi Weiqida for 50,000 shares of Oriental Wave under a reorganization plan. The transfer was accounted for as a reorganization of entities under common control as the companies were beneficially owned by identical shareholders and share common management. The financial statements have been prepared as if the reorganization had occurred retroactively.

The consolidated financial statements include the accounts of the Company and its 100% owned subsidiaries: Oriental Wave, Shanxi Weiqida, Allwin Newtech Ltd., Sanhe Kailong Bio-pharmaceutical Co., Ltd., Nanjing Huaxin Bio-pharmaceutical Co. Ltd. ("Huaxin"), Allwin Biotrade Inc. and Dragon Pharmaceuticals (Canada) Inc.. All significant intercompany balances and transactions have been eliminated upon consolidation.

The accompanying unaudited consolidated financial statements have been prepared in accordance with the instruction for Form 10-QSB pursuant to the rules and regulations of Securities and Exchange Commission and, therefore, do not include all information and notes normally provided in audited financial statements and should be read in conjunction with the Company's consolidated annual financial statements for the year ended December 31, 2004 included in the annual report previously filed on Form 10-KSB.

The results of operations for the interim periods presented are not necessarily indicative of the results to be expected for the full year.

DRAGON PHARMACEUTICAL INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
AS OF JUNE 30, 2005 AND DECEMBER 31, 2004
(UNAUDITED) Expressed in US Dollars

(B) Use of Estimates

In preparing consolidated financial statements in conformity with U.S. generally accepted accounting principles, management is required to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements and revenues and expenses during the reported period. Actual results could differ from those estimates.

(C) Cash and Cash Equivalents

For purposes of the cash flow statements, the Company considers all highly liquid investments with original maturities of three months or less at the time of purchase to be cash equivalents.

(D) Accounts Receivable

The Company extends unsecured credit to its customers in the ordinary course of business but mitigates the associated risks by performing credit checks and actively pursuing past due accounts. An allowance for doubtful accounts is established and recorded based on management's assessment of the credit history with the customer and current relationships with them.

(E) Investments

During the twelve months ended December 31, 2004, the Company made an investment in a private company of $12,077. The investment represents less than 1% of the total equity outstanding of the private company outstanding as of June 30, 2005. The private company investment is carried at cost and written down to fair market value when indications exist that this investment has other than temporarily declined in value. As of June 30, 2005, no impairment in the value of the investment has been recorded.

(F) Inventories

Inventories are stated at the lower of cost or market value, cost being determined on a first-in, first-out method. The Company provides inventory allowances based on excess and obsolete inventories determined principally by customer demand and product expiration dates.

8

DRAGON PHARMACEUTICAL INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
AS OF JUNE 30, 2005 AND DECEMBER 31, 2004
(UNAUDITED) Expressed in US Dollars

(G) Property and Equipment

Property and equipment are stated at cost, less accumulated depreciation. Expenditures for additions, major renewals and betterments are capitalized and expenditures for maintenance and repairs are charged to expense as incurred.

Depreciation is provided on a straight-line basis, less estimated residual value over the assets estimated useful lives. The estimated useful lives

are as follows:

Buildings	50 Years
Plant and machinery	10 Years
Motor vehicles	8 Years
Furniture, fixtures and equipment	5 Years
Leasehold improvements	Term of lease (5 -10 years)

Land use rights are stated at cost, less accumulated amortization. The land use rights are amortized over the term of the relevant rights of 50 years from the date of acquisition.

Depreciable assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable based on projected undiscounted cash flows associated with the assets. A loss is recognized for the difference between the fair value and the carrying amount of the assets. Fair value is determined based upon market quote, if available, or is based on valuation techniques.

(H) Fair Value of Financial Instruments

The carrying amount of the Company's cash and cash equivalents, receivables, investments and notes and other payables approximates their fair value. The fair value of the notes payables are estimated using discounted cash flow analysis, based upon the Company's current borrowing rates, and approximate their carrying value.

(I) Intangible Assets

Intangible assets represent licenses and permits for the production and sales of pharmaceutical products in China and are amortized on a straight-line basis over ten years.

Intangible assets are tested for impairment whenever events or circumstances indicate that a carrying amount may not be recoverable. An impairment loss would be recognized when the carrying amount of an asset exceeds the estimated un-discounted cash flows used in determining the fair value of the assets. The amount of the impairment loss to be recorded is calculated by the excess of the assets carrying value over its fair value. Fair value is generally determined using a discounted cash flow analysis.

(J) Revenue Recognition

The Company recognizes revenue from the sale of pharmaceutical products at the time when title to the products transfers, the amount is fixed and determinable, evidence of an agreement exists, and the customer bears the risk of loss, net of estimated provisions for returns, rebates and sales allowances. Revenues are recognized only when the Company has transferred to the customer the significant risk and rewards of ownership of the goods.

(K) Advertising Costs

Advertising costs are expensed as incurred. Advertising expense totaled

$7,854 and $13,041 for the six months ended June 30, 2005 and 2004, respectively and $6,873 and $11,882 for the three months ended June 30, 2005 and 2004, respectively.

(L) Research and Development

Research and development costs related to both present and future products are expensed as incurred. Total expenditures on research and development charged to selling, general and administrative expenses for the six months ended June 30, 2005 and 2004 were $67,201 and $96,756, respectively and $54,891 and $44,518 for the three months ended June 30, 2005 and 2004, respectively.

(M) Income Taxes

The Company accounts for income taxes under the Statement of Financial Accounting Standards No. 109, "Accounting for Income Taxes" ("Statement 109"). Under Statement 109, deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. Under Statement 109, the effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date. The Company located its factories in a special economic region in China. This economic region allows foreign enterprises a two-year income tax exemption from central government tax beginning in the first year after they become profitable, being the year commencing on January 1, 2003 to December 31, 2004 and a 50% income tax reduction for the following three years, being 2005 to 2007. The Company was approved as a wholly owned foreign enterprise in October 2002.

(N) Foreign Currency Translation

The functional currency of the majority of the business of the Company is the Chinese Renminbi ("RMB"), however, the Company reports in U.S. dollars. The operating accounts of the Company which are maintained in RMB are translated to U.S. dollars at US$1.00 = RMB 8.28 during the six month period. Transactions denominated in currencies other than RMB are translated into United States dollars using period end exchange rates as to assets and liabilities and average exchange rates as to revenues and expenses. Capital accounts are translated at their historical exchange rates when the capital transaction occurred. Net gains and losses resulting from foreign exchange translations are included in the statements of operations and stockholder's equity as other comprehensive gain (loss).

(O) Other Comprehensive Income

The foreign currency translation gain or loss resulting from translation of the financial statements expressed in RMB to United States Dollar is reported as other comprehensive income in the statements of operations and

stockholders' equity.

(P) Segments

The Company operates in three reportable segments, Chemical Division, Pharma Division and Biotech Division.

(Q) Earnings Per Share

Earnings per share are computed using the weighted average number of shares outstanding during the period. Diluted earnings per share, as determined using the treasury method, is equal to the basic income per share as common stock equivalents consisting of options to acquire 3,128,000 common shares that are outstanding at June 30, 2005 are not significantly dilutive, however, they may be dilutive in future.

(R) Reclassifications

Certain 2004 balances have been reclassified to conform to the 2005 presentation.

(S) Stock Based Compensation

The Company adopted the disclosure-only provisions of Statement of Financial Accounting Standards No. 123 (SFAS 123), "Accounting for Stock-based Compensation", as amended by SFAS No. 148 "Accounting for Stock-based Compensation - Transition and Disclosure - An amendment of SFAS No. 123". SFAS 123 encourages, but does not require, companies to adopt a fair value based method for determining expense related to stock-based compensation. The Company continues to account for stock-based compensation issued to employees and directors using the intrinsic value method as

prescribed under Accounting Principles Board Opinion (APB) No. 25, "Accounting for Stock Issued to Employees" and related Interpretations.

(T) Recent Accounting Pronouncements

In November 2004, the FASB issued SFAS No. 151, "Inventory Costs--an amendment of ARB No. 43, Chapter 4", which is the result of the FASB's project to reduce differences between U.S. and international accounting standards. SFAS No. 151 requires idle facility costs, abnormal freight, handling costs, and amounts of wasted materials (spoilage) be treated as current-period costs. Under this concept, if the costs associated with the actual level of spoilage or production defects are greater than the costs associated with the range of normal spoilage or defects, the difference would be charged to current-period expense, not included in inventory costs. SFAS No. 151 will be effective for inventory costs incurred during fiscal years beginning after June 15, 2005. The adoption of SFAS No. 151 does not have an impact on the Company's consolidated financial statements.

In December 2004, the FASB issued SFAS No. 123(R), "Accounting for Stock-Based Compensation". SFAS 123(R) establishes standards for the accounting for transactions in which an entity exchanges its equity instruments for goods or services. This Statement focuses primarily on accounting for transactions in which an entity obtains employee services in

share-based payment transactions. SFAS 123(R) requires that the fair value of such equity instruments be recognized as expense in the historical financial statements as services are performed. Prior to SFAS 123(R), only certain pro-forma disclosures of fair value were required. SFAS 123(R) shall be effective for the Company as of the beginning of the first interim or annual reporting period that begins after December 15, 2005. The adoption of this new accounting pronouncement does not have a material impact on the Company's consolidated financial statements.

In May 2005, the FASB issued Statement of Financial Accounting Standards SFAS No. 154, "Accounting Changes and Error Corrections, a replacement of APB Opinion No. 20 and FASB Statement No. 3." SFAS 154 requires retrospective application to prior periods' financial statements for changes in accounting principle, unless it is impracticable to determine either the period-specific effects or the cumulative effect of the change. SFAS 154 also requires that retrospective application of a change in accounting principle be limited to the direct effects of the change. Indirect effects of a change in accounting principle, such as a change in non-discretionary profit-sharing payments resulting from an accounting change, should be recognized in the period of the accounting change. SFAS 154 also requires that a change in depreciation, amortization, or depletion method for long-lived, non-financial assets be accounted for as a change in accounting estimate effected by a change in accounting principle. SFAS 154 is effective for accounting changes and corrections of errors made in fiscal years beginning after December 15, 2005. Early adoption is permitted for accounting changes and corrections of errors made in fiscal years beginning after the date this Statement is issued. The adoption of this new

accounting pronouncement does not have a material impact on its consolidated financial position, results of operations or cash flows.

NOTE 2 ACCOUNTS RECEIVABLE

Accounts receivable at June 30, 2005 and December 31, 2004 consisted of the following:

	June 30, 2005	RESTATED (NOTE 20) December 31, 2004
Trade and other receivables	$ 9,138,155	$ 6,799,872
Less: allowance for doubtful accounts	438,337	124,574
Accounts receivable, net	$ 8,699,818	$ 6,675,298

For the six months ended June 30, 2005 and 2004, the Company recorded an allowance for doubtful accounts of $12,610 and $182,500, respectively, in the Consolidated Statement of Operations.

NOTE 3 INVENTORIES

Inventories at June 30, 2005 and December 31, 2004 consisted of the following:

	June 30, 2005	RESTATED (NOTE 20) December 31, 2004
Raw materials	$ 4,421,108	$ 4,287,604
Work-in-progress	11,301,810	10,994,088
Finished goods	3,123,854	2,302,073
	18,846,772	17,583,765
Less: provision for obsolescence and impairment	1,245,782	959,859
	$ 17,600,990	$ 16,623,906

For the three and six month periods ended June 30, 2005 , the Company recorded a recovery from the provision for obsolete inventories of $762,764 and $286,181, respectively, in the Consolidated Statement of Operations compared to provisions for obsolete inventories of $274,219 and $274,219 for the three and six month periods ended June 30, 2004.

DRAGON PHARMACEUTICAL INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
AS OF JUNE 30, 2005 AND DECEMBER 31, 2004
(UNAUDITED) Expressed in US Dollars

NOTE 4 PROPERTY AND EQUIPMENT

The following is a summary of property and equipment at June 30, 2005 and December 31, 2004:

	June 30, 2005		
	Cost	Accumulated Depreciation	
Plant and equipment	$ 44,766,348	$ 5,431,081	$
Land and buildings	18,809,157	548,005	
Motor vehicles	773,792	187,610	
Furniture and office equipment	2,965,415	955,101	
Leasehold improvements	1,083,534	1,058,355	
Idle equipment	555,339	455,339	
Construction in progress	4,289,401	-	
	$ 73,242,986	$ 8,635,491	$

	December 31, 2004 RESTATED (NOTE 20)		
	Cost	Accumulated Depreciation	Ne V

Plant and equipment	$ 41,154,014	$ 2,293,918	$
Land and buildings	18,552,438	370,169	
Motor vehicles	611,261	55,166	
Furniture and office equipment	2,499,188	392,511	
Construction in progress	2,691,179	-	
	$ 65,508,080	$ 3,111,764	$

Depreciation expense for six month periods ended the June 30, 2005 and 2004 was $2,587,248 and $851,434 respectively. Depreciation expense for three month periods ended the June 30, 2005 and 2004 was $1,280,980 and $488,649 respectively.

14

DRAGON PHARMACEUTICAL INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
AS OF JUNE 30, 2005 AND DECEMBER 31, 2004
(UNAUDITED) Expressed in US Dollars

NOTE 5 ACQUISITIONS

(A) Land Use Rights

During July 2003, the Company acquired Land Use Rights and buildings from a government liquidator in exchange for assuming certain future employment, healthcare and Land Use Rights acquisition costs of the factory and its former employees. The agreement requires the Company to pay certain minimum wages and health care costs until the date of their employment, retirement or death, whichever occurs first. The maximum amount of the liabilities assumed on the closing date was $8,897,685 which approximates the appraised value of the Land Use Rights acquired. The Company has calculated the related asset value by computing the estimated fair value of the future expected payments to the remaining employees assuming an interest rate of 3% and has recorded the Land Use Rights at $3,332,907 (See Notes 7 and 14(D)). Subsequent to the acquisition the Company rehired a number of the former employees, reducing the expected future payments required. The Company has accounted for the reduction of the obligation by reducing the amount of Land Use Rights recorded. The cost of Land Use Rights as at June 30, 2005 and December 31, 2004 is as follows:

	June 30, 2005	RESTATED (NOTE 20) December 31, 2004
Original Cost recorded	$ 3,332,907	$ 3,332,907
Less: reduction of future accrued retirement benefit	1,163,387	1,135,238
Cost of Land Use Rights	$ 2,169,520	$ 2,197,669

The Land Use Rights have been reduced by $28,149 during the period ended June 30, 2005 and will be reduced in the future should payments be further reduced due to additional former employees being rehired.

(B) Oriental Wave Holding Limited

The Company completed the acquisition of Oriental Wave on January 12, 2005 whereby the Company issued 44,502,004 common shares in exchange for all of the issued and outstanding shares of Oriental Wave. The acquisition represented an important strategic step in strengthening the competitive position of the Company. The transaction has been approved by the Company's shareholders and the regulatory authorities, who also approved an increase in the authorized share capital to 200,000,000 common shares.

15

DRAGON PHARMACEUTICAL INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
AS OF JUNE 30, 2005 AND DECEMBER 31, 2004
(UNAUDITED) Expressed in US Dollars

This transaction resulted in the former shareholders of Oriental Wave owning 68.35% of the issued and outstanding shares of the combined entity as of January 12, 2005. Accounting principles applicable to reverse acquisition has been applied to record the acquisition. Under this basis of accounting, Oriental Wave is the acquirer and, accordingly, the consolidated entity is considered to be a continuation of Oriental Wave with the net assets of the Company deemed to have been acquired and recorded at its fair market value. The Statement of operations includes the results of Oriental Wave for the six months ended June 30, 2005 and those of the Company from January 13 to June 30, 2005.

The preliminary allocation of the net assets acquired is as follows:

Cash and short term securities	$ 2,103,481
Accounts receivable	1,382,119
Inventories	585,565
Prepaid and deposits	100,421
Total Current Assets	4,171,586
Fixed Assets	867,742
Intangible and other assets, net	2,349,222
Total Assets	7,388,550
Less accounts payables and accrued liabilities	(1,629,804)
Net assets acquired	$ 5,758,746

A summarized statement of operations for the Company for the twelve days ended January 12, 2005 is as follows:

Sales	$ 145,435
Gross Profit	109,059
Total operating expenses	166,881
Loss for the period	$ (57,822)

Pro-forma financial information, assuming the acquisition occurred January 1, 2004, are as follows:

For the six months ended June 30, RESTATED

	2005	(NOTE 20) 2004
Sales	23,325,007	16,262,400
Gross profit	6,500,003	8,579,619
Net income	1,1982,934	3,640,875
Earnings per share	$ 0.02	$ 0.06

DRAGON PHARMACEUTICAL INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
AS OF JUNE 30, 2005 AND DECEMBER 31, 2004
(UNAUDITED) Expressed in US Dollars

NOTE 6 INTANGIBLE ASSETS

The Company acquired $603,865 in licenses from a company related to a director with the balance being recorded pursuant to the reverse acquisition of Oriental Wave (Note 5(B)).

Intangible assets consist of the following as of June 30, 2005 and December 31, 2004:

	June 30, 2005	RESTATED (NOTE 20) December 31, 2004
Licenses	$ 2,951,814	$ 603,865
Less: accumulated amortization	454,132	171,096
	$ 2,497,682	$ 432,769

Amortization expense for the six month periods ended June 30, 2005 and 2004 was $283,036 and $30,193, respectively. For the three month periods ended June 30, 2005 and 2004, amortization expense was $153,011 and $15,097, respectively.

NOTE 7 ACCRUED RETIREMENT BENEFITS

During July 2003, the Company acquired land use rights and buildings from a government liquidator. The present value of the accrued retirement benefits assumed is recorded at June 30, 2005 and December 31, 2004 as follows:

	June 30, 2005	
Total liabilities assumed at closing date	$ 8,897,685	$
Less: reduction of liability due to re-employment	(4 ,949,474)	
Less: net present value of liabilities not expected to be paid	(615,304)	

Present value of expected liabilities		3,332,907	
Less: amounts paid and liabilities not expected to be paid		2,516,689	
		816,218	
Less: current portion		95,327	
	$	720,891	$

17

DRAGON PHARMACEUTICAL INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
AS OF JUNE 30, 2005 AND DECEMBER 31, 2004
(UNAUDITED) Expressed in US Dollars

Under the terms of the contract with the liquidator, the Company will remain contingently liable for these liabilities until the date of retirement or re-employment for each employee (See Notes 5(A) and 13.

NOTE 8 OTHER PAYABLES AND ACCRUED LIABILITIES

Other payables and accrued liabilities at June 30, 2005 and December 31, 2004 consist of the following:

		June 30, 2005	
Machinery and equipment payable	$	6,316,335	$
Accrued expenses		7,826,102	
Value added tax payables		279,178	
Income taxes payable		170,321	
Other taxes payable		108,471	
Deposits received from customers		3,912,961	
	$	18,613,368	$

18

DRAGON PHARMACEUTICAL INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
AS OF JUNE 30, 2005 AND DECEMBER 31, 2004
(UNAUDITED) Expressed in US Dollars

NOTE 9 NOTES PAYABLE

Balance at June 30, 2005 and December 31, 2004:

	June 30, 2005
Note payable to a bank, interest rate of 6.372% per annum, guaranteed by a third party, due June 2005 (*)	$ 420,290
Note payable to a bank, interest rate of 6.372% per annum, guaranteed by a third party, due June 2005 (*)	386,473
Note payable to a bank, interest rate of 8.874% per annum, guaranteed by a third party, due July 2005 (**)	603,865
Note payable to a bank, interest rate of 6.138% per annum, secured by fixed assets of $5,047,038, due November 2005	3,623,188
Note payable to a bank, interest rate of 6.039% per annum, secured by leasehold land and fixed assets, due April 2005	-
Note payable to a bank, interest rate of 6.039% per annum, secured by leasehold land and fixed assets of $3,192,237, due April 2006	1,811,594
Note payable to a bank, interest rate of 5.76% per annum, secured by fixed assets of $9,996,803, due November 2006	6,316,426
Note payable to a bank, interest rate of 6.039% per annum, secured by leasehold land and fixed assets of $3,860,503, due April 2007	6,642,512
	19,804,348
Less current maturities	6,845,410
	$ 12,958,938

* The Company is in the process of renegotiating and extending the repayment term on the Notes Payable due in June 2005 but the process has been extended due to additional information being required from the guarantor of the Notes. In the meantime, the Company has subsequently repaid $120,773 in July 2005 and $299,517 in August 2005 and intends to further repay $386,473 in September 2005. The Company intends to re-borrow the full amount of the Notes once the guarantor has been re-approved by the bank.

** The Note payable due in July 2005 has been renegotiated and the repayment term extended to October 2005.

Maturities are as follows:

Fiscal year ended December 31,	
2005	$ 5,033,816
2006	8,128,020
2007	6,642,512

	$ 19,804,348

NOTE 10 LONG TERM ACCOUNTS PAYABLE

Long term accounts payable balances at June 30, 2005 and December 31, 2004 is the final payment of construction contracts which had been finished as of December 31, 2004. According to the contract terms, the final payments on the contracts will be settled as follows:

	June 30, 2005	RESTATED (NOTE 20) December 31, 2004
Settlement Arrangement		
Accounts payable due July to November, 2006	$ 21,712,222	$ 21,873,147

NOTE 11 DUE TO RELATED PARTIES

The amounts due to related party at June 30, 2005 and December 31, 2004 are unsecured and non-interest bearing:

	June 30, 2005
Due to a company owned by a stockholder and director due March 2006	$ -
Due to a company owned by a stockholder and director due March 2006	892,206
	892,206
Less: current maturities	892,206
	$ -

NOTE 12 SEGMENTS

The Company operates in three reportable segments, the Pharma Division, Chemical Division and Biotech Division. The Pharma Division produces chemical generic, mainly anti-infectious, drugs. The Chemical Division produces the bulk intermediate or ingredient to sell to other pharmaceutical companies for further processing and formulation into finished products. The Biotech Division produces Erythropoietin or EPO, an injection that stimulates red blood cell. Substantially all assets and

operations of the Company are located in China, which is considered as one geographic location in an economic environment with similar risks and returns. The accounting policies of the segments are the same as described in the summary of significant accounting policies. The Company evaluates segment performance based on income from operations. All intercompany transactions between segments have been eliminated. As a result, the components of operating income for one segment may not be comparable to another segment. The following is a summary of the Company's segment information for the periods ended June 30, 2005 and 2004 and as of June 30, 2005 and December 31, 2004.

21

DRAGON PHARMACEUTICAL INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
AS OF JUNE 30, 2005 AND DECEMBER 31, 2004
(UNAUDITED) Expressed in US Dollars

	Chemical Division	Pharma Division	Biotech Division
2005			
Three months ended June 30, 2005			
Sales	$ 4,880,013	$ 5,686,800	$ 784,
Gross profit	184,473	2,410,184	587,
Depreciation and amortization RESTATED (NOTE 20)	1,059,381	184,907	215,
Six months ended June 30, 2005			
Sales	10,584,046	11,007,571	1,587,
Gross profit	218,898	4,918,407	1,253,
Depreciation and amortization RESTATED (NOTE 20)	2,116,968	338,711	414,
As at June 30, 2005			
Total assets RESTATED (NOTE 20)	69,819,365	22,129,522	5,447,
Additions to long-lived assets	3,860,225	84,541	4,
Intangible assets	-	402,575	2,095,
2004			
Three months ended June 30, 2004			
Sales	533,785	6,787,164	
Gross profit	121,318	3,915,450	
Depreciation and amortization	369,700	134,046	
Six months ended June 30, 2004			
Sales	1,383,570	13,092,415	
Gross profit	449,491	6,785,210	
Depreciation and amortization	604,481	277,146	
As at December 31, 2004			
Total assets RESTATED (NOTE 20)	66,726,390	23,611,914	
Additions to long-lived assets	27,295,156	852,773	
Intangible assets	-	432,769	

DRAGON PHARMACEUTICAL INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
AS OF JUNE 30, 2005 AND DECEMBER 31, 2004
(UNAUDITED) Expressed in US Dollars

NOTE 13 OTHER INCOME - Funds Released by Chinese Government Liquidator

In July 2003, the Company, through Shanxi Weiqida, acquired out of bankruptcy the land use rights of a state-owned enterprise. (Please also refer to Note 5(A)) After entering into this transaction, the Company was approached by an unrelated state agency to administer certain benefits payable to former employees of the agency (the government liquidator) as the Company had already established an infrastructure to make payments to these employees for settlement of liabilities related to the transaction. As a result, during 2004, the Company received $1,751,208 from the government liquidator, for the settlement of human resources related expenses of the bankrupt enterprise. As well, during the first quarter of 2005, a separate municipal agency, the Datong Municipal Government, approved the transfer of a fund with a balance of $140,036 originally reserved for the employee housing welfare as part of the liquidation process of the state-owned enterprise. The two agencies, unrelated to the acquisition, allowed the Company to retain the cash balance of $745,828 as well as the reserve of $140,036 as payment for services provided by the Company. As a result, the Company recorded other income of $885,864 during the current period to reflect the above transactions.

NOTE 14 COMMITMENTS AND CONTINGENCIES

(A) Employee Benefits

The full time employees of Shanxi Weiqida are entitled to employee benefits including medical care, welfare subsidies, unemployment insurance and pension benefits through a Chinese government mandated multi-employer defined contribution plan. The Company is required to accrue for those benefits based on certain percentages of the employees' salaries. The total provision for such employee benefits was $86,744 and $204,532 for the six month periods ended June 30, 2005 and 2004, respectively and $29,473 and $62,802 for the three month periods ended June 30, 2005 and 2004, respectively . The Company is required to make contributions to the plans out of the amounts accrued for medical and pension benefits. The Chinese government is responsible for the medical benefits and the pension liability to be paid to these employees.

DRAGON PHARMACEUTICAL INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
AS OF JUNE 30, 2005 AND DECEMBER 31, 2004
(UNAUDITED) Expressed in US Dollars

(B) Loan Guarantee

The Company has guaranteed bank loans to two suppliers in the amount of $181,000 (RMB1.5 million) due on August 11, 2005 (repaid subsequent to June 30, 2005) and $2,415,000 (RMB20 million) due on July 16, 2005 (extended to July 16, 2005 subsequent to July 16, 2006). Interest on the loan due July

16, 2006 is charged at 7.905% and the bank has the right to seek settlement from the Company for payment should the two supplier fail to repay the loan. There is no recourse or possible recovery for the Company should the suppliers default on their bank loans. The maximum potential amount of future payments (undiscounted) that the Company could be required to make is $2,614,274. The Company provided the guarantees to these suppliers to maintain a good business relationship.

The Company has also issued a guarantee to a bank as security for loans to a third party vendor of $2,415,000 (RMB20 million) due on September 26, 2007 and $3,623,000 (RMB30 million) due on October 27, 2007. Interest is charged at the bank's base rate plus 5.9475 %. The bank has the right to seek settlement from the Company for payment should the third party vendor fail to repay the loan. The maximum potential amount of future payments (undiscounted) that the Company could be required to make is $ 6,861,101. This vendor has pledged assets totaling $8,484,000 (RMB70.2 million) to the Company for this guarantee.

(C) Capital Commitments

According to the Articles of Association of Shanxi Weiqida, the Company has to fulfill registered capital of $19,205,116 (RMB 159,018,360) within five years from December 16, 2003. As of June 30, 2005, the Company has fulfilled $14,656,174 (RMB 121,353,123) of registered capital requirement and has registered capital commitments of $4,548,942 (See Note 15(A)).

(D) Contingent Employment Benefits

During July 2003, the Company acquired land and buildings from a government liquidator in exchange for assuming certain future employment, healthcare and land acquisition costs of the factory and its former employees. Under the terms of the contract with the liquidator, the Company will remain contingently liable for these liabilities until the earliest of date of retirement, re-employment or death for each employee. As of June 30, 2005, the Company has rehired 655 former employees, 236 employees have retired and 163 former employees remain unemployed. If the Company is unable to provide continued employment to these individuals, it will be liable to pay each former employee approximately $49 per month until his or her date of retirement, at age 60 or 50, respectively, or death, whichever comes first (See Notes 5 & 7).

24

DRAGON PHARMACEUTICAL INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
AS OF JUNE 30, 2005 AND DECEMBER 31, 2004
(UNAUDITED) Expressed in US Dollars

(E) Operating Leases

The Company has entered into operating lease agreements with respect to Huaxin's production plant in Nanjing, China for an amount of RMB 2,700,000 (US$326,217) per annum until June 11, 2009 and the Company's administrative offices in Vancouver for an amount escalating from CDN$200,000 to CDN$230,000 (US$127,000 to US$146,000) per annum until March 31, 2007. The Company decided to close the facility in Nanjing, effective July 31, 2005, and build a new facility in Datong, China at the site of the manufacturing facilities of Oriental Wave which is expected to be completed by September 30, 2005. The Company has renegotiated the termination of its lease, without penalty, though the Company may be required to pay up to approximately RMB 580,000 ($70,000) relating to severance and benefit costs associated with the closure, of which RMB 500,000 (US$60,000) has been

accrued at June 30, 2005. Minimum payments required under the agreements are as follows:

2005	$ 119,174
2006	188,202
2007	47,400
Total	$354,776

(F) Cell Line Development

The Company has contracted with a European Institute of Biotechnology to develop a high yield proprietary cell line and production process technology for the Company. Product from this advanced technology will be used by the Company to enter the European market, once certain competitor's patents expire. The total cost of development is $648,800 (EUROS 500,000) of which $387,600 (EUROS 300,000) remains unpaid at June 30, 2005.

NOTE 15 STOCKHOLDERS' EQUITY

(A) Capital Contribution (See note 14(C))

On January 31, 2005 and on February 22, 2005 Oriental Wave paid Shanxi Weiqida $479,988 and $198,682, respectively, towards its registered capital requirement under Chinese law.

(B) Reserves

Pursuant to PRC regulations, Shanxi Weiqida is required to make appropriations to reserves funds, comprising the statutory surplus reserve, statutory public welfare fund and discretionary surplus reserve, based on after-tax net income determined in accordance with generally accepted accounting principles of the People's Republic of China (the "PRC GAAP"). Appropriation to the statutory surplus reserve should be at least 10% of

the after tax net income determined in accordance with the PRC GAAP until the reserve is equal to 50% of the Company's registered capital. The transfer to this reserve must be made before distribution of dividends to shareholders. Except for the reduction for losses incurred, any other usage should not result in this reserve balance falling below 25% of the registered capital. Appropriations to the statutory public welfare fund are at 5% to 10% of the after tax net income determined in accordance with the PRC GAAP. The statutory public welfare fund is established for the purpose of providing employee facilities and other collective benefits to the employees and is non-distributable other than in liquidation. Appropriations to the discretionary surplus reserve are made at the discretion of the Board of Directors. These reserves are not available for distribution to owners under general operating conditions.

(C) Stock Options

The Company has adopted the 2001 Stock Option Plan, effective December 17, 2001, which allows for the granting of options to Directors and Employees

for a period of up to ten years. The Company did not grant any options during the year ended December 31, 2004. During the period ended June 30, 2005, the Company granted options to its directors and employees to purchase 2,260,000 shares at a price of $1.18 per share (being the market price at the time), expiring January 12, 2010. Options to purchase 1,460,000 shares were exercisable immediately with 400,000 options becoming available January 12, 2006 and the balance of 400,000 options vesting on January 12, 2007.

The following summarizes stock option information for the period ended June 30, 2005:

	Shares	W
Options outstanding at December 31, 2003	2,599,000	
Forfeited	(705,000)	
Exercised	(145,000)	
Options outstanding at December 31, 2004	1,749,000	
Granted	2,260,000	
Forfeited	(919,500)	
Options outstanding at June 30, 2005	3,089,500	

26

DRAGON PHARMACEUTICAL INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
AS OF JUNE 30, 2005 AND DECEMBER 31, 2004
(UNAUDITED) Expressed in US Dollars

Options Outstanding				
Range of Exercise Prices	Number Outstanding	Weighted Average Remaining Contractual Life	Weighted Average Exercise Price	N Exer
$0.01 - $1.00	350,000	2.76	$0.68	
$1.01 - $2.00	2,439,500	4.34	$1.22	
$3.01 - $4.00	300,000	0.37	$3.13	
	3,089,500	3.78	$1.34	

The Company accounts for its stock-based compensation plan in accordance with APB Opinion No. 25, under which no compensation is recognized in connection with options granted to employees and directors except if options are granted with a strike price below fair value of the underlying stock. The Company adopted the disclosure requirements SFAS No. 123, Accounting for Stock-Based Compensation. Accordingly, the Company is required to calculate and present the pro forma effect of all awards granted. For disclosure purposes, the fair value of each option granted to an employee has been estimated as of the date of grant using the Black-Scholes option pricing model with the following assumptions: risk-free interest rate of 5.5%, dividend yield 0%, volatility of 90%, and expected lives of approximately 0 to 5 years. The weighted average fair value of the options granted during the period was $0.69. Based on the computed option values and the number of the options issued, had the Company recognized compensation expense, the following would have been its effect on the Company's net income:

For the six months ended June 30,	2005	RESTATED (NOTE 20) 2004
Net income for the period:		
- as reported	$1,237,416	$4,278,3
- pro-forma	$ 90,972	$4,278,3
Basic and diluted income per share:		
- as reported	$0.02	$0.10
- pro-forma	$0.00	$0.10

DRAGON PHARMACEUTICAL INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
AS OF JUNE 30, 2005 AND DECEMBER 31, 2004
(UNAUDITED) Expressed in US Dollars

NOTE 16 INCOME TAXES

Shanxi Weiqida and Huaxin are subject to income taxes in China on their taxable income as reported in their statutory accounts at a tax rate in accordance with the relevant income tax laws.

Oriental Wave, Allwin Newtech Ltd. and Allwin Biotrade Inc are BVI companies and are not subject to income taxes. Dragon Pharmaceutical Inc. and Dragon Pharmaceutical (Canada) Inc. are U.S. and Canadian companies, respectively, and are subject to taxes in those jurisdictions.

NOTE 17 RELATED PARTY TRANSACTIONS

See Notes 6 and 11.

NOTE 18 CONCENTRATIONS AND RISKS

92.5% and 89% of the Company's revenues for the three and six months ended June 30, 2005, respectively, were derived from customers located in China and 99% of its assets at June 30, 2005 are located in China. Comparatively, 100% of the Company's revenues during the three and six months ended June 30, 2004 were derived from customers located in China and 100% of its assets were located in China.

The Company is exposed to the risk arising from changing interest rates. A detailed analysis of the Company's Notes Payable, together with their respective interest rates and maturity dates, are included in Note 9.

The majority of the Company's assets, liabilities, revenues and expenses are denominated in Renminbi which is tied to the US Dollar and is not a freely convertible currency. The deregulation of the Renminbi resulting in an appreciation of the Renminbi against the US Dollar would result in an increase in the assets, liabilities, revenues and expenses of the Company and a foreign currency gain included in comprehensive income (See Note 19(A)). Conversely, the devaluation of the Renminbi against the US Dollar would result in a decrease in the assets, liabilities, revenues and expenses of the Company and a foreign currency loss included in comprehensive income. At June 30, 2005, approximately US$1,148,000 of the cash and cash equivalents (December 31, 2004: US$885,681) are held in Renminbi.

NOTE 19 SUBSEQUENT EVENTS

(A) Renminbi Appreciation

On July 22, 2005, the Chinese government decided to no longer peg the value of the Renminbi to the US dollar but rather to a basket of currencies of its largest trading partners. The result was an appreciation of the Renminbi of approximately 2% against the value of the US dollar. The effect of the revaluation will be an increase in the assets, liabilities, revenues and expenses of the Company and a foreign currency gain included in comprehensive income.

(B) Notes payable extension

The Company has renegotiated, repaid and extended certain notes payable subsequent to June 30, 2005 as described in Note 9.

NOTE 20 RESTATEMENT

As a result of a review of its accounting policies and applicable accounting pronouncements, the Company has concluded that the reduction of a future retirement benefit obligation related to the acquisition of a land use right from a former state-owned enterprise in China by Oriental Wave Holding Limited ("Oriental Wave") in July 2003, should have been accounted

for as a reduction to the recorded cost of the land use right instead of as a non-operating gain from extinguishment of debt, as previously disclosed in Oriental Wave's 2004 financial statements. As a result, Oriental Wave's 2004 financial statements have been restated retroactive to June 2004 to reflect such change in accounting treatment.

29

DRAGON PHARMACEUTICAL INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
AS OF JUNE 30, 2005 AND DECEMBER 31, 2004
(UNAUDITED) Expressed in US Dollars

The reduction of the future retirement benefit obligation during 2004, totaling $1,135,238 million, which was recognized as a non-operating gain, has been recorded as a reduction to the cost of the land use right. On a going forward basis, any similar reduction of the retirement benefit obligation will be treated as a reduction to the recorded cost of the land use right. The effect on the financial statements is as follows:

	As at December 31, 2004	
	Restated	Previously Reported
Current assets	$25,283,300	$25,283,300
Property and equipment	62,396,316	63,520,202
Other assets	2,658,688	2,658,688
Total assets	$ 90,338,304	$ 91,462,190
Liabilities	$ 68,800,517	$ 68,800,517
Share capital	14,027,504	14,027,504
Retained earnings	7,562,432	8,686,318
Due from shareholder/comp loss	(52,149)	(52,149)
Total equity	21,537,787	22,661,673
Total liabilities and equity	$ 90,338,304	$ 91,462,190

	Three months ended June 30, 2004		Six months
	Restated	Previously Reported	Restated
Net Sales	$ 7,320,949	$ 7,320,949	$ 14,475,98
Cost of sales	3,284,181	3,284,181	7,241,28

Gross profit	4,036,768	4,036,768	7,234,70
Operating expenses	1,356,691	1,356,691	2,600,08
Income from operations	2,680,077	2,680,077	4,634,62
Other income (expense)	10,707	845,244	(3,908
Income before taxes	2,690,784	3,525,321	4,630,71
Income tax expense	352,410	352,410	352,41
Net income	$ 2,338,374	$ 3,172,911	$ 4,278,30
Net Income per share	$ 0.05	$ 0.07	$ 0.1

DRAGON PHARMACEUTICAL INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
AS OF JUNE 30, 2005 AND DECEMBER 31, 2004
(UNAUDITED) Expressed in US Dollars

	Three months ended March 31, 2005	
	Restated	Previously Reported
Net Sales	11,828,663	11,828,663
Cost of sales	8,619,484	8,619,484
Gross profit	3,209,179	3,209,179
Operating expenses	2,392,040	2,397,716
Income from operations	817,139	811,463
Other income (expenses)	620,363	620,363
Income before taxes	1,437,502	1,431,826
Income tax expense	196,746	196,746
Net income	1,240,756	1,235,080
Net Income per share	$ 0.02	$ 0.02

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

Overview

The following discusses the Company's financial condition and results of operations for the three and six months ended June 30, 2005 based upon the Company's interim unaudited consolidated financial statements which have been prepared in accordance with the United States generally accepted accounting principles. It should be read in conjunction with the Company's audited financial statements and the notes thereto and other financial information included in the Company's Form 10-KSB for the fiscal year ended December 31, 2004. Due to the fact that Dragon's acquisition of Oriental Wave Holding Limited ("Oriental Wave") on January 12, 2005 is deemed to be a reverse-take-over transaction, the following discussion reflects the Company's results of operations for the three and six months ended June 30, 2005, including the results of Oriental Wave for the full six months and the results of Dragon's biotech business for the period of January 12, 2005 to June 30, 2005. Comparatively, the results of operations for the three and six months ended June 30, 2004 only reflected the Pharma and Chemical businesses of Oriental Wave.

Incorporated in Florida, USA and headquartered in Vancouver, B.C., Canada, Dragon, prior to the acquisition of Oriental Wave, was formed for the purpose of developing, marketing and selling biologics such as Erythropoietin ("EPO") in China and international markets outside of China. Through its wholly-owned drug manufacturing company Nanjing Huaxin Bio-pharmaceutical Co., Ltd. ("Nanjing Huaxin") located in Nanjing City, China, Dragon manufactures and sells EPO. Dragon's EPO has been approved and marketed in nine countries including China, India, Egypt, Brazil, Ecuador, Dominican Republic, Trinidad-Tobago, Peru, and Kosovo. In addition, we are preparing to enter the European market upon obtaining product approval of our newly developed EPO products.

On January 12, 2005, the Company or ("Dragon") completed the acquisition of Oriental Wave Holding Ltd. ("Oriental Wave") in a reverse take over transaction. Oriental Wave, through its wholly owned subsidiary in China, Shanxi Weiqida Pharmaceutical Ltd. ("Shanxi Weiqida"), currently has three production facilities in China: two Chinese State Food and Drug Administration ("SFDA") certified GMP production facilities consisting of a pharmaceutical facility with a capacity of producing 1.6 billion tablets and capsules, 80 million injectables and 10 million suppositories per year and a chemical plant producing clavulanic acid. In addition, Oriental Wave has a third facility producing 7-ACA, an intermediate for Cephalosporin antibiotics by a fermentation process. As an intermediate, the 7-ACA facility doesn't require GMP certification. Oriental Wave has a total of approximately 306 drug approvals from the SFDA of which about 66, mainly anti-infectious drugs, were actively exploited in China in 2004. Dragon acquired all of the outstanding shares of Oriental Wave from Mr. Yanlin Han, Mr. Zhanguo Weng and Ms. Xuemei Liu. As a result of the acquisition, Mr. Han, Mr. Weng and Ms. Liu collectively owned 68.35% of Dragon's outstanding shares of common stock at the date of the transaction.

As a result of the acquisition of Oriental Wave, Dragon has been transformed into a diversified and growth oriented generic pharmaceutical company with three key business units consisting of a Biotech division for biologics products, such as Erythropoietin or EPO, a Chemical division for bulk pharmaceutical chemical and intermediate such as Clavulanic Acid and 7-ACA and a Pharma division for formulated drugs, including prescription and over-the-counter drugs, and sterilized bulk drugs. Through the acquisition, the Company has significantly increased the size of operations and now has four manufacturing facilities in China (three in Datong city and one in Nanjing city), approximately 1,800 employees, with over 1,200 contract sales representatives in China, and approximately 58 key products in 90 different

dosages and presentations currently in the market. The Company now operates its three business divisions: a Pharma Division, a Chemical Division, and a Biotech Division, through two indirect wholly-owned subsidiaries in China, Shanxi Weiqida Pharmaceutical Ltd. ("Shanxi Weiqida") and Nanjing Huaxin Bio-pharmaceutical Co., Ltd. ("Nanjing Huaxin"). The Company maintains its sales network through 63 sales offices and over 1,200 sales representatives throughout China for Pharma products sales and marketing, while it uses a direct sales model through the in-house sales department to sell Chemical products to other domestic and international pharmaceutical companies. The Company's product development department in China works on R&D of new generic products and regulatory affaires of new products, presentations, and dosages approval, and cooperates with external research institutes and companies to develop new products as well. The Company's headquarters, located in Vancouver, has finance department for financial reporting, SEC compliance, corporate finance and investor relations, international sales department for international sales and marketing, regulatory affairs department for international product approval, and business development department for exploring new business opportunities. The Company also operates a European office on product development of new EPO for European market, Chemical bulk drugs and formulation drugs, technology acquisition, and international sales.

Pharma Division

Pharma Division's operations are located in Datong Economic and Technology Development Zone, Datong City, Shanxi Province, China. Pharma Division produces chemical generic, mainly anti-infectious, drugs. Pharma Division currently holds approximately 306 product approvals from the Chinese drug approval authority (SFDA), with which only 52 prescription, Over-the-counter and sterilized bulk products are currently commercialized in China. The Company plans to build a new workshop for the freeze-drying of temperature sensitive pharmaceutical products. (See liquidity section) Among these products is Levofloxacin, a product marketed by the Company whose production is currently outsourced to a third party contract manufacturer. The Pharma Division operates its business strategies to focus on the expansion and development of the Chinese market by managing its product portfolio and selecting potential products for commercialization, strengthen R&D and introduce generic drugs with potential market through cooperation and acquisition, and conduct market research and product development for preparing the launching of OTC product branding strategy.

Chemical Division

The Chemical Division's operations are located in Datong Gongnong Road, Datong City, Shanxi Province, China. Chemical Division produces the bulk intermediate or ingredient to sell to other pharmaceutical companies for further processing and formulation into finished products. The Chemical Division manages the production of Clavulanic Acid, 7-ACA, and Abamectin for both the Chinese and international markets. In January 2004, the Chemical Division began its operation of a production facility for Clavulanic Acid, and in July 2004, the second production facility of the Chemical Division to produce 7-ACA started its operation. The third production facility for Abamectin with planned 120-ton production capacity is currently under construction and is expected to be completed in the fourth quarter of 2005. One of the key products in Chemical Division is Clavulanic Acid, a drug that combines with antibiotics to fight drug resistance. Dragon is currently the sole commercial producer in China. Two Clavulanic Acid products were approved to export to India and initial quantities of these two products to India has already started in 2004. Another key product in the Chemical Division is 7-ACA, an intermediate for Cephalosporin antibiotics. The 500-ton production capacity of 7-ACA makes Dragon among the main produces in the world. 7-ACA's export to India has already started in 2004. In 2004, Dragon's Chemical Division entered into a 3 year long term supply agreement with Aurobindo Pharma Limited, an Indian pharmaceutical company, to

purchase 50% of the products from Chemical Division. The Chemical Division

operates its business strategies to upgrade its technology in order to improve yields and lower production cost, to develop 7-ACA and Clavulanic Acid downstream bulk products, and to apply for DMF approvals in US and EU to enter into international market.

Biotech Division

The Biotech Division's operations are currently located in Nanjing City, Jiangsu Province, China. The sole product of the Biotech Division is Erythropoietin or EPO, an injection that stimulates red blood cell, the best selling drug in the world with a market size of US$10 billion in 2004. Dragon's EPO is the generic version of the originator's product. Dragon's Biotech Division develops, manufactures and markets generic biotech products with China (72% of the divisional revenues in 2004) and developing countries as the current core markets, and has already been approved and sold in 9 countries: China, India, Egypt, Brazil, Peru, Ecuador, Trinidad-Tobago, Dominican Republic and Kosovo. Currently, Dragon's EPO only competes in countries where there is no patent protection. Dragon is in preparation to enter the European market with a new EPO product under development in Austria. The Company is also building a brand new EPO production facility in Datong city, China and will relocate the EPO production from its current facility in Nanjing city. The new EPO production site adjacent to the campus of the Chemical division, which already includes the entire basic infrastructure such as power, steam, purified water supply and water treatment facilities, is under construction. The relocation of the EPO production site to Datong will allow the Company to capitalize on the existing production infrastructure and the efficiency of unified operational management. In the new facility, it is anticipated that the capacity for bulk EPO will be doubled and the capacity for sterile filing will be tripled. The Biotech Division operates its business strategies to increase market share through integration of sales network, to increase the sales in surgical usage as one of the two approved surgical indication suppliers, and to enter into European and other developed countries market with product developed in Europe.

Critical Accounting Policies and Estimates and Recent Accounting Pronouncements

The accompanying management's discussion and analysis of results of operations and financial condition are based upon the Dragon's consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States of America (GAAP). The preparation of these financial statements requires management to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues, and expenses and related disclosure of contingent assets and liabilities. Management evaluates estimates on an ongoing basis. Management bases its estimates on historical experiences and various other factors and assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ materially from these estimates under different assumptions or conditions.

A summary of significant accounting policies and a description of accounting policies that are considered critical are described in Note 1 to the Consolidated Financial Statements contained in this report and in Note 3 to the Dragon's Annual Report on Form 10-KSB for the year ended December 31, 2004. In addition, a description of Recent Accounting Pronouncements is contained in Note 1(T) to the Consolidated Financial Statements contained in this report and in Note 3(r) to the Consolidated Financial Statements to the Corporation's Annual Report on Form 10-KSB for the year ended December 31, 2004.

Results of Operations

Results of Operations for the Three and Six Months Ended June 30, 2005 and 2004

Sales.

Sales for the three months period ended June 30, 2005 increased 55% to $11.35 million from $7.32 million for the same period in 2004. $10.50 million or approximately 92% of the sales for the three months period ended June 30, 2005 were generated from the sales of products in the Chinese market, and the remaining $0.85 million or approximately 8% were generated from the sales of products in the international markets. All sales for the three months period ended June 30, 2004 were generated from the sale of products in the Chinese market. In the three months ended June 30, 2005, $5.69 million or approximately 50% of the sales were from the Pharma Division, $4.88 million or 43% of sales were from the Chemical Division, and $0.78 million or 7% of sales were from the Biotech Division. For the same period in 2004, 93% of sales were from the Pharma Division and 7% of sales were from the Chemical Division which commenced operation on January 1, 2004.

Sales for the six months period ended June 30, 2005 increased 60% to $23.18 million from $14.48 million for the same period in 2004. $20.61 million or approximately 89% of the sales for the six months period ended June 30, 2005 were generated from the sales of products in the Chinese market, and the remaining $2.57 million or approximately 11% were generated from the sales of products in the international markets. All sales for the six months period ended June 30, 2004 were generated from the sale of products in the Chinese market. In the six months period ended June 30, 2005, $11.01 million or approximately 47% of the sales were from the Pharma Division, $10.58 million or 46% of sales were from the Chemical Division, and $1.59 million or 7% of sales were from the Biotech Division. For the same period in 2004, 90% of sales were from the Pharma Division and 10% of sales were from the Chemical Division which commenced operation on January 1, 2004. The increase in sales during the three and six months ended June 30, 2005 as compared to the same period for the prior year was primarily due to increase in sales from the Chemical and Biotech Division.

Cost of sales for the three months ended June 30, 2005 was $8.17 million compared to $3.28 million for the same period of 2004. The cost of sales is attributed to the production costs of Dragon's pharmaceutical products with the increase in the cost of sales related to the growth in products and sales in the Chemical Division. Gross profit and gross margin for the three months ended June 30, 2005 were $3.18 million and 28% compared to $4.04 million and 55% for the same period of 2004.

Cost of sales for the six months ended June 30, 2005 was $16.79 million compared to $7.24 million for the same period of 2004. Gross profit and gross margin for the six months ended June 30, 2005 were $6.39 million and 28% compared to $7.23 million and 50% for the same period of 2004. The decrease in gross margin was mainly due to a change in the product mix from the previous year. The Chemical Division, whose facilities were brand new in 2004 and is currently at the ramp up stage of the production which incurs higher production and operation cost, especially depreciation expenses, increased the cost of sales significantly during the three and six months ended June 30, 2005.

Divisional Revenues and Gross Margin Analysis

The Company's businesses are organized under three business divisions: Pharma Division, Chemical Division and Biotech Division.

Pharma Division

Pharma Division's revenues for the three months ended June 30, 2005 were $5.69 million, accounting for 50% of the total revenues of the Company. Comparatively, Pharma Division's revenues were $6.79 million for the same period in 2004, contributing 93% of the total revenues of the Company. Pharma Division's revenues for the six months ended June 30, 2005 were $11.01 million, accounting for 47% of the total revenues of the Company. Comparatively, Pharma Division's revenues were $13.09 million for the same period in 2004, contributing 90% of the total revenues of the Company. The lowering of percentage of revenues from the Pharma division to the Company was due to the tremendous growth of the brand new Chemical division achieved during the three and six months ended June 30, 2005. The overall gross margin for the division for the three months ended June 30, 2005 was 42% as compared to 58% for the same period of 2004, and the overall gross margin for the division for the six months ended June 30, 2005 was 45% as compared to 52% for the same period of 2004. The lowering of revenues and gross profit was mainly due to a change in product mix with more new products introduced in the market and the reduction in prices of certain prescription drugs due to increasing competition. The Company introduced a number of new prescription and over-the-counter drugs in the market at a more competitive price initially in order to gain market awareness and market share.

Chemical Division

Chemical Division's revenues for the three months ended June 30, 2005 were $4.88 million, representing a 814% increase from the revenues of 0.53 million during the same period in 2004. Chemical Division's revenues for the six months ended June 30, 2005 were $10.58 million, representing a 665% increase from the revenues of $1.38 million during the same period in 2004. The increase is due to the introduction of 7-ACA and the expansion of Clavulanic Acid sales outside China. The Chemical division was new in 2004 as only the Clavulanic Acid facility had started production and the sales during the first six months of 2004 were only made to Chinese customers. Since then, the Company started the pilot production of the 7-ACA production facility and the Company has received export permits to sell two Clavulanic Acid products to the Indian market.

Chemical Division's gross margin for the three and six months ended June 30, 2005 was 4% and 2%, respectively, compared to 23% and 32% for the three and six months ended June 30, 2004, respectively. The gross margin for the division was low as the Company has increased and expanded the infrastructure, and the fixed manufacturing costs associated, but is still in the process of ramping up production to cost efficient levels. The initial Chemical Division production in 2004 was limited to Clavulanic Acid and was produced with older, smaller scale production infrastructure. The Company constructed the new production infrastructure (power, steam, purified water supply and water treatment) during 2004 as the old production infrastructure was insufficient to produce the amount of Clavulanic Acid and 7-ACA desired. The new facilities have greatly increased production capacity but also have significantly higher fixed costs in the form of depreciation cost ($1.06 million and $0.36 million for the three months ended June 30, 2005 and 2004, respectively and $2.17 million and $0.60 million for the six months ended June 30, 2005 and 2004, respectively) of the new facilities constructed and overhead of the utilities costs to power the new facilities. These fixed costs represent more than a third of the cost of sales at the current production levels but are expected to fall significantly, on a percentage basis, when the anticipated production levels are achieved.

Subsequent to the quarter end, the Company has increased the production of 7-ACA from approximately 30% to 80% of the full production capacity which will

increase the sales of the Chemical Division.

36

Biotechize:1pt;">

(In thousands, except per share amounts)
Revenue:

Royalties
$
33,599

$
72,787

$
85,022

$
211,733

Product revenue
11,753

8,661

27,153

27,966

Contract and other revenue
14,402

17,686

50,463

51,506

Total revenue
59,754

99,134

162,638

291,205

Operating costs and expenses:

Cost of product revenue*
5,376

5,152

13,932

17,882

Cost of contract and other revenue
5,952

14,456

29,163

43,274

Research and development*
43,131

36,196

120,944

109,718

Sales, general and administrative*
24,462

26,799

79,143

82,122

Gain from sale of intellectual property
—

(479
)

—

(479
)
Restructuring charges
—

—

2,223

—

Total operating costs and expenses
78,921

82,124

245,405

252,517

Operating income (loss)
(19,167
)

17,010

(82,767
)

38,688

Interest income and other income (expense), net
8,008

208

25,373

491

Interest expense
(3,976
)

(3,287
)

(13,031
)

(9,754
)
Interest and other income (expense), net

4,032

(3,079
)

12,342

(9,263
)
Income (loss) before income taxes
(15,135
)

13,931

(70,425
)

29,425

Provision for income taxes
89,758

6,236

85,514

16,119

Net income (loss)
$
(104,893
)

$
7,695

$
(155,939
)

$
13,306

Net income (loss) per share:

Basic
$
(0.97
)

$
0.07

$
(1.44
)

$
0.12

Diluted
$
(0.97
)

$
0.07

$
(1.44
)

$
0.12

Weighted average shares used in per share calculation:

Basic
107,897

109,555

108,324

110,353

Diluted
107,897

113,119

108,324

113,861

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* Includes stock-based compensation:

Cost of product revenue	$2	$20	$7	$53
Research and development	$3,184	$2,969	$9,662	$9,048
Sales, general and administrative	$3,003	$3,975	$5,922	$11,068

See Notes to Unaudited Condensed Consolidated Financial Statements

7

Table of Contents

RAMBUS INC.
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(Unaudited)

	Three Months Ended September 30,		Nine Months Ended September 30,	
(In thousands)	2018	2017	2018	2017
Net income (loss)	$(104,893)	$7,695	$(155,939)	$13,306
Other comprehensive income (loss):				
Foreign currency translation adjustment	(1,027)	2,581	(2,798)	7,177
Unrealized gain (loss) on marketable securities, net of tax	(42)	339	(734)	634
Total comprehensive income (loss)	$(105,962)	$10,615	$(159,471)	$21,117

See Notes to Unaudited Condensed Consolidated Financial Statements

Table of Contents

RAMBUS INC.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited)

	Nine Months Ended September 30,	
	2018	2017
	(In thousands)	
Cash flows from operating activities:		
Net income (loss)	$(155,939)	$13,306
Adjustments to reconcile net income (loss) to net cash provided by operating activities:		
Stock-based compensation	15,591	20,169
Depreciation	8,107	9,971
Amortization of intangible assets	24,352	31,436
Non-cash interest expense and amortization of convertible debt issuance costs	7,587	5,324
Deferred income taxes	78,660	(4,108)
Non-cash restructuring	670	—
Gain from sale of marketable equity security	(291)	—
Gain from sale of assets held for sale	(1,266)	—
Loss from disposal of property, plant and equipment	518	169
Change in operating assets and liabilities:		
Accounts receivable	(16,862)	(23,656)
Unbilled receivables	118,872	—
Prepaid expenses and other assets	(3,729)	6,824
Inventories	(1,271)	617
Accounts payable	153	(2,795)
Accrued salaries and benefits and other liabilities	(6,823)	(1,698)
Income taxes payable	(9,618)	(960)
Deferred revenue	(6,647)	3,248
Net cash provided by operating activities	52,064	57,847
Cash flows from investing activities:		
Purchases of property, plant and equipment	(7,849)	(5,444)
Acquisition of intangible assets	—	(120)
Purchases of marketable securities	(192,824)	—
Maturities of marketable securities	181,704	32,048
Proceeds from sale of equity security	1,350	—
Proceeds from sale of marketable securities	—	4,450
Proceeds from sale of assets held for sale	3,754	—
Proceeds from sale of property, plant and equipment	10	28
Net cash provided by (used in) investing activities	(13,855)	30,962
Cash flows from financing activities:		
Proceeds received from issuance of common stock under employee stock plans	9,266	10,792
Principal payments against lease financing obligation	(786)	(625)
Payments of taxes on restricted stock units	(5,964)	(3,525)
Repayment of 1.125% convertible notes due 2018	(81,207)	—
Repurchase and retirement of common stock, including prepayment under accelerated share repurchase program	(50,031)	(50,036)
Net cash used in financing activities	(128,722)	(43,394)
Effect of exchange rate changes on cash and cash equivalents	(797)	1,636

9

Table of Contents

Net increase (decrease) in cash and cash equivalents	(91,310)	47,051
Cash and cash equivalents at beginning of period	225,844	135,294
Cash and cash equivalents at end of period	$134,534	$182,345
Non-cash investing activities during the period:		
Property, plant and equipment received and accrued in accounts payable and other liabilities	$675	$1,294

See Notes to Unaudited Condensed Consolidated Financial Statements

10

Table of Contents

RAMBUS INC.
NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

1. Basis of Presentation

The accompanying unaudited condensed consolidated financial statements include the accounts of Rambus Inc. ("Rambus" or the "Company") and its wholly-owned subsidiaries. All intercompany accounts and transactions have been eliminated in the accompanying unaudited condensed consolidated financial statements.

In the opinion of management, the unaudited condensed consolidated financial statements include all adjustments (consisting only of normal recurring items) necessary to state fairly the financial position and results of operations for each interim period presented. Interim results are not necessarily indicative of results for a full year.

The unaudited condensed consolidated financial statements have been prepared in accordance with the rules and regulations of the Securities and Exchange Commission (the "SEC") applicable to interim financial information. Certain information and Note disclosures included in the financial statements prepared in accordance with generally accepted accounting principles have been omitted in these interim statements pursuant to such SEC rules and regulations. The information included in this Form 10-Q should be read in conjunction with the consolidated financial statements and notes thereto in Form 10-K for the year ended December 31, 2017.

Operating Segment Definitions

Operating segments are based upon Rambus' internal organization structure, the manner in which its operations are managed, the criteria used by its Chief Operating Decision Maker ("CODM") to evaluate segment performance and availability of separate financial information regularly reviewed for resource allocation and performance assessment. The Company determined its CODM to be the Chief Executive Officer and determined its operating segments to be: (1) Memory and Interfaces Division ("MID"), which focuses on the design, development, manufacturing through partnerships and licensing of technology and solutions that is related to memory and interfaces; (2) Rambus Security Division ("RSD"), which focuses on the design, development, deployment and licensing of technologies for chip, system and in-field application security, anti-counterfeiting, smart ticketing and mobile payments; and (3) Emerging Solutions Division ("ESD"), which includes the Rambus Labs team and the development efforts in the area of emerging technologies.

On January 30, 2018, the Company announced its plans to close its lighting division ("RLD") including related manufacturing operations in Brecksville, Ohio. The Company believes that such business is not core to its strategy and growth objectives. Refer to Note 15, "Restructuring Charges" for additional details.

For the three and nine months ended September 30, 2018, only MID and RSD were reportable segments as each of them met the quantitative thresholds for disclosure as a reportable segment. The results of the remaining operating segments were shown under "Other," which included RLD.

Comparability

Effective January 1, 2018, Rambus adopted multiple new accounting standards. Prior periods were not retrospectively restated, so the consolidated balance sheet as of December 31, 2017 and results of operations for the three and nine months ended September 30, 2017 were prepared using accounting standards that were different than those in effect as of and for the three and nine months ended September 30, 2018. Therefore, the consolidated balance sheets as of September 30, 2018 and December 31, 2017 are not directly comparable, nor are the results of operations for the three and nine months ended September 30, 2018 and 2017.

Reclassifications

Certain prior periods' amounts were reclassified to conform to the current year's presentation. None of these reclassifications had an impact on reported net income for any of the periods presented.

2. Recent Accounting Pronouncements

Recent Accounting Pronouncements Adopted

In February 2018, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2018-02, "Income Statement - Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income". The amendments in this ASU allow entities to reclassify from AOCI to retained

Table of Contents

earnings "stranded" tax effects resulting from passage of the Tax Cuts and Jobs Act ("the Act") on December 22, 2017. An entity that elects to reclassify these amounts must reclassify stranded tax effects related to the change in federal tax rate for all items accounted for in other comprehensive income (e.g., employee benefits, cumulative translation adjustments). Entities may also elect to reclassify other stranded tax effects that relate to the Act but do not directly relate to the change in the federal tax rate (e.g., state taxes). However, because the amendments only relate to the reclassification of the income tax effects of the Act, the underlying guidance requiring the effect of a change in tax laws or rates to be included in income from operations is not affected. Upon adoption of this ASU, entities are required to disclose their policy for releasing the income tax effects from AOCI. ASU 2018-02 is effective for annual periods beginning after December 15, 2018, and interim periods within those fiscal years. Early adoption is permitted. The amendments in this ASU may be applied retrospectively to each period in which the effect of the Act is recognized or an entity may elect to apply the amendments in the period of adoption. The Company early adopted this ASU in the first quarter of 2018. The adoption of this ASU did not have a material impact on the Company's consolidated financial statements.

In May 2017, the FASB issued ASU No. 2017-09, "Compensation—Stock Compensation (Topic 718): Scope of Modification Accounting," which amends the scope of modification accounting for share-based payment arrangements. Specifically, an entity would not apply modification accounting if the fair value, vesting conditions, and classification of the awards are the same immediately before and after the modification. This ASU is effective for interim and annual reporting periods beginning after December 15, 2017. The Company adopted this ASU on January 1, 2018. The adoption of this ASU did not have a material impact on the Company's consolidated financial statements.

In January 2017, the FASB issued ASU No. 2017-01, "Business Combinations (Topic 805): Clarifying the Definition of a Business." The amendment seeks to clarify the definition of a business with the objective of adding guidance to assist entities with evaluating whether transactions should be accounted for as acquisitions (or disposals) of assets or businesses. The definition of a business affects many areas of accounting including acquisitions, disposals, goodwill and consolidation. This ASU is effective for interim and annual reporting periods beginning after December 15, 2017, including interim periods within those periods. The amendments should be applied prospectively on or after the effective dates. The Company adopted this ASU on January 1, 2018. The adoption of this ASU did not have a material impact on the Company's consolidated financial statements.

In January 2016, the FASB issued ASU No. 2016-01, which amends certain aspects of the recognition, measurement, presentation and disclosure of certain financial instruments, including equity investments and liabilities measured at fair value under the fair value option. The main provisions include a requirement that all investments in equity securities be measured at fair value through earnings, with certain exceptions, and a requirement to present separately in other comprehensive income the portion of the total change in fair value attributable to an entity’s own credit risk for financial liabilities where the fair value option has been elected. The Company adopted this ASU on January 1, 2018. Upon adoption, the Company reclassified approximately $1.1 million of unrealized gain related to its equity investment security classified as available-for-sale from accumulated other comprehensive income (AOCI) to retained earnings as a cumulative-effect adjustment, and began recording changes in fair value through earnings.

ASU No. 2014-09, Revenue from Contracts with Customers

In May 2014, the FASB issued ASU No. 2014-09, Revenue from Contracts with Customers in Accounting Standards Codification (ASC) Topic 606 ("ASC 606" or "the New Revenue Standard"), which superseded the revenue recognition requirements in ASC Topic 605, Revenue Recognition (“ASC 605”). The New Revenue Standard sets forth a single, comprehensive revenue recognition model for all contracts with customers to improve comparability. The New Revenue Standard requires revenue recognition to depict the transfer of goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The New Revenue Standard can be applied either retrospectively to each prior reporting period presented (i.e., full retrospective adoption) or with the cumulative effect of initially applying the update recognized at the date of the initial application (i.e., modified retrospective adoption) along with additional disclosures.

The Company adopted the New Revenue Standard on January 1, 2018 and all the related amendments using the modified retrospective method. The Company had previously planned on adopting the New Revenue Standard using the full retrospective method, but ultimately determined to adopt the modified retrospective method. The Company

recognized the cumulative effect of initially applying the new revenue standard as an adjustment to the opening balance of accumulated deficit as of January 1, 2018. The comparative information for prior periods has not been recasted and continues to be reported under the accounting standards in effect for those periods. The Company recognized unbilled receivables (contract assets) of $818 million predominantly due to how revenue is recognized for the Company's fixed-fee licensing arrangements (as noted in the first bullet point below), deferred revenue (contract liabilities) of $2 million, withholding tax liabilities of $105 million (and a corresponding deferred tax asset of $105 million, with an offsetting $16 million valuation allowance), and $174 million deferred tax liability. In the aggregate, these adjustments resulted in a $626 million net credit to accumulated deficit.

Table of Contents

The most significant impacts of the New Revenue Standard relate to the following:

- Revenue recognized for certain patent and technology licensing arrangements has changed under the New Revenue Standard. Revenue for (i) fixed-fee arrangements (including arrangements that include minimum guaranteed amounts), (ii) variable royalty arrangements that the Company has concluded are fixed in substance and (iii) the fixed portion of hybrid fixed/variable arrangements is recognized upon control over the underlying IP use right transferring to the licensee rather than upon billing under ASC 605, net of the effect of significant financing components calculated using customer-specific, risk-adjusted lending rates and recognized over time on an effective rate basis. As a consequence of the acceleration of revenue recognition and for matching purposes, all withholding taxes to be paid over the term of these licensing arrangements were expensed on the date the licensing revenue was recognized.

- Adoption of the New Revenue Standard resulted in revenue recognition being accelerated for variable royalties and the variable portion of hybrid fixed/variable patent and technology licensing arrangements. Under the New Revenue Standard, royalty revenue is being recognized on the basis of management's estimates of sales or usage, as applicable, of the licensed IP in the period of reference, with a true-up being recorded in subsequent periods based on actual sales or usage as reported by licensees (rather than upon receiving royalty reports from licensees as was the case under ASC 605).

- Adoption of the New Revenue Standard also resulted in revenue recognition being accelerated for certain professional services arrangements, including arrangements consisting of significant software customization or modification and development arrangements. Under the New Revenue Standard, such arrangements are accounted for based on man-days incurred during the reporting period as compared to estimated total man-days necessary for contract completion, as the customer either controls the asset as it is created or enhanced by us or, where the asset has no alternative use to us, we are entitled to payment for performance to date and expect to fulfill the contract - revenue recognition is no longer capped to the lesser of inputs in the period or accepted billable project milestones as was the case under ASC 605.

Adoption of the New Revenue Standard had no impact to cash provided by (used in) operating, financing, or investing activities on the Company's Consolidated Statements of Cash Flows.

In accordance with the New Revenue Standard requirements, the disclosure of the impact of adoption on the Company's Consolidated Statement of Operations and Balance Sheet was as follows (in thousands):

	Three Months Ended September 30, 2018			Nine Months Ended September 30, 2018		
(In thousands)	As Reported	Effect of Change Higher/ (Lower)	Amounts under ASC 605	As Reported	Effect of Change Higher/ (Lower)	Amounts under ASC 605
Consolidated Statement of Operations						
Revenue:						
Royalties	$33,599	$42,105	$75,704	$85,022	$141,482	$226,504
Product revenue	11,753	—	11,753	27,153	377	27,530
Contract and other revenue	14,402	(2,019)	12,383	50,463	(5,378)	45,085
Total revenue	$59,754	$40,086	$99,840	$162,638	$136,481	$299,119
Costs and expenses:						
Interest income and other income (expense), net	$8,008	$(6,532)	$1,476	$25,373	$(21,087)	$4,286
Provision for income taxes	$89,758	$(10,509)	$79,249	$85,514	$—	$85,514
Net loss	$(104,893)	$44,063	$(60,830)	$(155,939)	$115,394	$(40,545)

13

Table of Contents

(In thousands)	September 30, 2018 As Reported	Effect of Change Higher/ (Lower)	Amounts under ASC 605
Consolidated Balance Sheet			
Assets:			
Unbilled receivables	$699,909	$(699,909)	$ —
Liabilities:			
Deferred revenue	12,877	(88)	12,789
Income taxes payable	99,184	(94,117)	5,067
Stockholders’ equity:			
Accumulated deficit	202,276	510,894	713,170

Recent Accounting Pronouncements Not Yet Adopted

In August 2018, the FASB issued ASU 2018-13, "Fair Value Measurement (Topic 820): Disclosure Framework-Changes to the Disclosure Requirements for Fair Value Measurement." The amendments in this ASU remove certain disclosures, modify certain disclosures and add additional disclosures. This ASU is effective for interim and annual reporting periods beginning after December 15, 2019. Early adoption is permitted. Certain disclosures in ASU 2018-13 would need to be applied on a retrospective basis and others on a prospective basis. The Company is currently evaluating the impact that this guidance will have on its consolidated financial statements.

In June 2018, the FASB issued ASU 2018-07, "Compensation - Stock Compensation (Topic 718)," to expand the scope of Topic 718 to include share-based payment transactions for acquiring goods and services from nonemployees. This ASU is effective for interim and annual reporting periods beginning after December 15, 2018. Early adoption is permitted, including adoption in an interim period. The Company is currently evaluating the impact that this guidance will have on its consolidated financial statements.

In July 2017, the FASB issued ASU No. 2017-11, "Earnings Per Share (Topic 260), Distinguishing Liabilities from Equity (Topic 480), Derivatives and Hedging (Topic 815)." The amendments in Part I of this ASU change the classification analysis of certain equity-linked financial instruments (or embedded features) with down round features. When determining whether certain financial instruments should be classified as liabilities or equity instruments, a down round feature no longer precludes equity classification when assessing whether the instrument is indexed to an entity’s own stock. The amendments also clarify existing disclosure requirements for equity-classified instruments. As a result, a freestanding equity-linked financial instrument (or embedded conversion option) no longer would be accounted for as a derivative liability at fair value as a result of the existence of a down round feature. For freestanding equity classified financial instruments, the amendments require entities that present earnings per share (EPS) in accordance with Topic 260 to recognize the effect of the down round feature when it is triggered. That effect is treated as a dividend and as a reduction of income available to common shareholders in basic EPS. Convertible instruments with embedded conversion options that have down round features are now subject to the specialized guidance for contingent beneficial conversion features (in Subtopic 470-20, Debt-Debt with Conversion and Other Options), including related EPS guidance (in Topic 260). The amendments in Part II of this ASU recharacterize the indefinite deferral of certain provisions of Topic 480 that now are presented as pending content in the FASB codification, to a scope exception. Those amendments do not have an accounting effect. This ASU is effective for interim and annual reporting periods beginning after December 15, 2018. Early adoption is permitted, including adoption in an interim period. The Company is currently evaluating the impact that this guidance will have on its consolidated financial statements.

In March 2017, the FASB issued ASU No. 2017-08, "Receivables - Nonrefundable Fees and Other Costs (Topic 310): Premium Amortization on Purchased Callable Debt Securities," which amends the amortization period for certain

purchased callable debt securities held at a premium. This ASU will shorten the amortization period for the premium to be amortized to the earliest call date. This ASU does not apply to securities held at a discount, which will continue to be amortized to maturity. This ASU is effective for interim and annual reporting periods beginning after December 15, 2018. Early adoption is permitted, including adoption in an interim period. The Company is currently evaluating the impact that this guidance will have on its consolidated financial statements.

Table of Contents

In January 2017, the FASB issued ASU No. 2017-04, "Intangibles-Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment," which removes Step 2 of the goodwill impairment test. A goodwill impairment will now be the amount by which a reporting unit's carrying value exceeds its fair value, not to exceed the carrying amount of goodwill. This ASU is effective for interim and annual reporting periods beginning after December 15, 2019. Early adoption is permitted, including adoption in an interim period. The Company is currently evaluating the impact that this guidance will have on its consolidated financial statements.
In June 2016, the FASB issued ASU No. 2016-13. The purpose of this ASU is to require a financial asset measured at amortized cost basis to be presented at the net amount expected to be collected. Credit losses relating to available-for-sale debt securities should be recorded through an allowance for credit losses. This ASU is effective for interim and annual reporting periods beginning after December 15, 2019. The Company is currently evaluating the impact that this guidance will have on its financial condition and results of operations.
In February 2016, the FASB issued ASU No. 2016-02, "Leases." This ASU requires lessees to recognize right-of-use assets and liabilities for operating leases, initially measured at the present value of the lease payments, on the balance sheet. In addition, it requires lessees to recognize a single lease cost, calculated so that the cost of the lease is allocated over the lease term, generally on a straight-line basis. In July 2018, the FASB issued ASU No. 2018-10, "Codification Improvements to Topic 842, Leases," and ASU No. 2018-11, "Leases (Topic 842)," which allow the application of the new guidance at the beginning of the year of adoption, recognizing a cumulative-effect adjustment to the opening balance of retained earnings in the period of adoption, in addition to the method of applying the new guidance retrospectively to each prior reporting period presented. The amendments in ASU No. 2018-10 and ASU No. 2018-11 have the same effective and transition requirements as ASU 2016-02.
This ASU will become effective for the Company in the first quarter of fiscal year 2019. The Company is evaluating the impact that the new accounting standard will have on its consolidated financial statements, which will consist primarily of a balance sheet gross up of right-of-use assets and lease liabilities on the consolidated balance sheets upon adoption, which will increase the Company's total assets and liabilities.

3. Revenue Recognition
The Company recognizes revenue upon transfer of control of promised goods and services in an amount that reflects the consideration it expects to receive in exchange for those goods and services. Unless indicated otherwise below, all of the goods and services are distinct and are accounted for as separate performance obligations.
Where an arrangement includes multiple performance obligations, the transaction price is allocated to these on a relative standalone selling prices basis. The Company has established standalone selling prices for all of its offerings - specifically, a same pricing methodology is consistently applied to all licensing arrangements; all services offerings are priced within tightly controlled bands and all contracts that include support and maintenance state a renewal rate or price that is systematically enforced.
Rambus' revenue consists of royalty, product and contract and other revenue. Royalty revenue consists of patent and technology license royalties. Products consist of memory buffer chipsets sold directly and indirectly to module manufacturers and OEMs worldwide through multiple channels, including our direct sales force and distributors. Contract and other revenue consists of software license fees, engineering fees associated with integration of Rambus' technology solutions into its customers' products and support and maintenance fees.
1.Royalty Revenue
Rambus' patent and technology licensing arrangements generally range between 1 and 7 years in duration and generally grant the licensee the right to use the Company's entire IP portfolio as it evolves over time. These arrangements do not typically grant the licensee the right to terminate for convenience and where such rights exist, termination is prospective, with no refund of fees already paid by the licensee. There is no interdependency or interrelation between the IP included in the portfolio licensed upon contract inception and any IP subsequently made available to the licensee, and the Company would be able to fulfill its promises by transferring the portfolio and the additional IP use rights independently. However, the numbers of additions to, and removals from the portfolio (for

example when a patent expires and renewal is not granted to the Company) in any given period have historically been relatively consistent; as such, the Company does not allocate the transaction price between the rights granted at contract inception and those subsequently granted over time as a function of these additions.

Table of Contents

Patent and technology licensing arrangements result in fixed payments received over time, with guaranteed minimum payments on occasion, variable payments calculated based on the licensee's sale or use of the IP, or a mix of fixed and variable payments.
For fixed-fee arrangements (including arrangements that include minimum guaranteed amounts), variable royalty arrangements that the Company has concluded are fixed in substance and the fixed portion of hybrid fixed/variable arrangements, the Company recognizes revenue upon control over the underlying IP use right transferring to the licensee, net of the effect of significant financing components calculated using customer-specific, risk-adjusted lending rates ranging between 3% and 6%, with the related interest income being recognized over time on an effective rate basis. Where a licensee has the contractual right to terminate a fixed-fee arrangement for convenience without any substantive penalty payable upon such termination, the Company applies the guidance in the New Revenue Standard to the duration of the contract in which the parties have present enforceable rights and obligations and only recognizes revenue for amounts that are due and payable.

For variable arrangements, the Company recognizes revenue based on an estimate of the licensee's sale or usage of the IP during the period of reference, typically quarterly, with a true-up being recorded when the Company receives the actual royalty report from the licensee.

2.Product Revenue
Product revenue is recognized upon shipment of product to customers, net of accruals for estimated sales returns and allowances, and to distributors, net of accruals for price protection and rights of return on products unsold by the distributors. To date, none of these accruals have been significant. The Company transacts with direct customers primarily pursuant to standard purchase orders for delivery of products and generally allows customers to cancel or change purchase orders within limited notice periods prior to the scheduled shipment date.
3.Contract and Other Revenue
Contract and other revenue consists of software license fees and engineering fees associated with integration of Rambus' technology solutions into its customers' related support and maintenance.
An initial software arrangement generally consists of a term-based or perpetual license, significant software customization services and support and maintenance services that include post-implementation customer support and the right to unspecified software updates and enhancements on a when and if available basis. The Company recognizes the license and customization services revenue based on man-days incurred during the reporting period as compared to the estimated total man-days necessary for each contract, and the support and maintenance revenue ratably over term. The Company recognizes license renewal revenue at the beginning of the renewal period. The Company recognizes revenue from professional services purchased in addition to an initial software arrangement on a cumulative catch-up basis if these services are not distinct from the services provided as part of the initial software arrangement, or as a separate contract if these services are distinct.
During the first quarter of 2016, the Company acquired Smart Card Software Ltd., which included Bell Identification Ltd. (Payment Product Group) and Ecebs Ltd. (Ticketing Products Group), which transact mostly in software and Software-as-a-Service arrangements, respectively.
The Company's Payment Product Group derives a significant portion of its revenue from heavily customized software in the mobile market, whereby the Payment Product Group's software solution interacts with third-party solutions and other payment platforms to provide the functionality the customer requires. Historically, these third-party solutions have evolved at a rapid pace, with the Payment Product Group being required to deliver as part of its support and maintenance services the patches and updates needed to maintain the functionality of its own software offering. As the utility of the solution to the end customer erodes very quickly without these updates, these are viewed as critical and the customized software solution and updates are not separately identifiable. As such, these arrangements are treated as a single performance obligation; revenue is deferred until completion of the customization services, and recognized ratably over the committed support and maintenance term, typically ranging from 1 year to 3 years.
The Company's Ticketing Products Group primarily derives revenue from ticketing services arrangements that systematically consist of a software component, support and maintenance, managed services and hosting services. The

software could be hosted by third-party hosting service providers or the Company. All arrangements entered into subsequent to the acquisition preclude customers from taking possession of the software at any time during the hosting term and the Company has concluded that should a customer that was under contract as of the acquisition date ever request possession of the software, the Ticketing Products Group would have the ability to charge the customer, and enforce a claim to payment of a substantive fee in exchange for such right, and that the costs of setting up the environment needed to run the software would act as a

16

Table of Contents

significant disincentive to the customer taking possession of the software. Based on the above, the Company concluded that these services are a single performance obligation, with customers simultaneously receiving and consuming the benefits provided by the Ticketing Products Group's performance, and recognize ticketing services revenue ratably over the term, commencing upon completion of setup activities. The Company recognizes setup fees upon completion. While these activities do not transfer a service to the customer, the Company elected not to defer and amortize these fees over the expected duration of the customer relationship owing to the immateriality of the amounts charged.

Significant Judgments

Historically and with the exception noted below, no significant judgment has generally been required in determining the amount and timing of revenue from the Company's contracts with customers.

- The Company has adequate tools and controls in place, and substantial experience and expertise in timely and accurately tracking man-days incurred in completing customization and other professional services, and quantifying changes in estimates.

Key estimates used in recognizing revenue predominantly consist of the following:

- All fixed-fee arrangements result in cash being received after control over the underlying IP use right has transferred to the licensee, and over a period exceeding a year. As such, all these arrangements include a significant financing component. The Company calculates a customer-specific lending rate using a Daily Treasury Yield Curve Rate that changes depending on the date on which the licensing arrangement was entered into and the term (in years) of the arrangement, and takes into consideration a licensee-specific risk profile determined based on a review of the licensee's "Full Company View" Dun & Bradstreet report obtained on the date the licensing arrangement was signed by the parties, with a risk premium being added to the Daily Treasury Yield Curve Rate considering the overall business risk, financing strength and risk indicators, as listed.

- The Company recognizes revenue on variable fee licensing arrangements on the basis of estimates. In connection with the adoption of the New Revenue Standard, the Company has set up specific procedures and controls to ensure timely and accurate quantification of variable royalties, and implemented new systems to enable the preparation of the estimates and reporting of the financial information required by the New Revenue Standard.

Contract Balances

Timing of revenue recognition may differ from the timing of invoicing to the Company's customers. The Company records contract assets when revenue is recognized prior to invoicing, and a contract liability when revenue is recognized subsequent to invoicing.

The contract assets are primarily related to the Company's fixed fee IP licensing arrangements and rights to consideration for performance obligations delivered but not billed as of September 30, 2018. The contract assets are transferred to receivables when the billing occurs.

The Company's contract balances were as follows:

(In thousands)	As of September 30, 2018	January 1, 2018
Unbilled receivables	$699,909	$818,371
Deferred revenue	12,877	20,737

During the three and nine months ended September 30, 2018, the Company recognized $3.2 million and $19.6 million of revenue, respectively, that was included in the contract balances, as adjusted for ASC 606, as of January 1, 2018.

Revenue allocated to remaining performance obligations represents the transaction price allocated to the performance obligations that are unsatisfied, or partially unsatisfied, which includes unearned revenue and amounts that will be invoiced and recognized as revenue in future periods. Contracted but unsatisfied performance obligations were approximately $10.3 million as of September 30, 2018, which the Company primarily expects to recognize over the next 2 years.

17

Table of Contents

4. Earnings (Loss) Per Share

Basic earnings (loss) per share is calculated by dividing the net income (loss) by the weighted average number of common shares outstanding during the period. Diluted earnings per share is calculated by dividing the earnings by the weighted average number of common shares and potentially dilutive securities outstanding during the period. Potentially dilutive common shares consist of incremental common shares issuable upon exercise of stock options, employee stock purchases, restricted stock and restricted stock units and shares issuable upon the conversion of convertible notes. The dilutive effect of outstanding shares is reflected in diluted earnings per share by application of the treasury stock method. This method includes consideration of the amounts to be paid by the employees and the amount of unrecognized stock-based compensation related to future services. No potential dilutive common shares are included in the computation of any diluted per share amount when a net loss is reported.

The following table sets forth the computation of basic and diluted net income (loss) per share:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
Net income (loss) per share:	(In thousands, except per share amounts)			
Numerator:				
Net income (loss)	$(104,893)	$7,695	$(155,939)	$13,306
Denominator:				
Weighted-average shares outstanding - basic	107,897	109,555	108,324	110,353
Effect of potential dilutive common shares	—	3,564	—	3,508
Weighted-average shares outstanding - diluted	107,897	113,119	108,324	113,861
Basic net income (loss) per share	$(0.97)	$0.07	$(1.44)	$0.12
Diluted net income (loss) per share	$(0.97)	$0.07	$(1.44)	$0.12

For the three months ended September 30, 2018 and 2017, options to purchase approximately 1.4 million and 1.8 million shares, respectively, and for the nine months ended September 30, 2018 and 2017, options to purchase approximately 1.3 million and 1.9 million shares, respectively, were excluded from the calculation because they were anti-dilutive after considering proceeds from exercise and related unrecognized stock-based compensation expense. For the three and nine months ended September 30, 2018, an additional 1.9 million and 2.8 million shares, respectively, were excluded from the weighted average dilutive shares because there was a net loss position for the periods.

5. Intangible Assets and Goodwill

Goodwill

The following tables present goodwill information for each of the reportable segments for the nine months ended September 30, 2018:

Reportable Segment:	As of December 31, 2017	Effect of Exchange Rates (1)	As of September 30, 2018
	(In thousands)		
MID	$66,643	$—	$66,643
RSD	143,018	(1,545)	141,473
Total	$209,661	$(1,545)	$208,116

(1) Effect of exchange rates relates to foreign currency translation adjustments for the period.

Table of Contents

	As of September 30, 2018		
Reportable Segment:	Gross Carrying Amount	Accumulated Impairment Losses	Net Carrying Amount
	(In thousands)		
MID	$66,643	$ —	$66,643
RSD	141,473	—	141,473
Other	21,770	(21,770)	—
Total	$229,886	$ (21,770)	$208,116

Intangible Assets

The components of the Company's intangible assets as of September 30, 2018 and December 31, 2017 were as follows:

		As of September 30, 2018		
	Useful Life	Gross Carrying Amount (1)	Accumulated Amortization (1)	Net Carrying Amount
		(In thousands)		
Existing technology	3 to 10 years	$259,131	$ (210,086)	$ 49,045
Customer contracts and contractual relationships	1 to 10 years	68,167	(53,401)	14,766
Non-compete agreements and trademarks	3 years	300	(300)	—
In-process research and development	Not applicable	1,600	—	1,600
Total intangible assets		$329,198	$ (263,787)	$ 65,411

		As of December 31, 2017		
	Useful Life	Gross Carrying Amount (1)	Accumulated Amortization (1)	Net Carrying Amount
		(In thousands)		
Existing technology	3 to 10 years	$258,008	$ (191,554)	$ 66,454
Customer contracts and contractual relationships	1 to 10 years	68,794	(48,626)	20,168
Non-compete agreements and trademarks	3 years	300	(300)	—
In-process research and development	Not applicable	5,100	—	5,100
Total intangible assets		$332,202	$ (240,480)	$ 91,722

(1) The changes in gross carrying amount and accumulated amortization reflect the effects of exchange rates during the period.

During the three and nine months ended September 30, 2018, the Company did not purchase or sell any intangible assets. During the three and nine months ended September 30, 2017, the Company acquired patents related to its memory technology for an immaterial amount.

Included in customer contracts and contractual relationships are favorable contracts which are acquired software and service agreements where the Company has no performance obligations. Cash received from these acquired favorable

contracts reduces the favorable contract intangible asset. For the three months ended September 30, 2018 and 2017, the Company received $0.2 million and $0.5 million, respectively, related to the favorable contracts. For the nine months ended September 30, 2018 and 2017, the Company received $1.1 million and $2.8 million, respectively, related to the favorable contracts. As of September 30, 2018 and December 31, 2017, the net balance of the favorable contract intangible assets was $1.0 million and $1.7 million, respectively.

Table of Contents

Amortization expense for intangible assets for the three and nine months ended September 30, 2018 was $5.1 million and $24.4 million, respectively. Amortization expense for intangible assets for the three and nine months ended September 30, 2017 was $10.5 million and $31.4 million, respectively. The estimated future amortization of intangible assets as of September 30, 2018 was as follows (amounts in thousands):

Years Ending December 31:	Amount
2018 (remaining 3 months)	$4,874
2019	20,251
2020	20,293
2021	13,083
2022	2,002
Thereafter	3,308
Total amortizable purchased intangible assets	$63,811
In-process research and development	1,600
Total intangible assets	$65,411

It is reasonably possible that the businesses could perform significantly below the Company's expectations or a deterioration of market and economic conditions could occur. This would adversely impact the Company's ability to meet its projected results, which could cause the goodwill in any of its reporting units or long-lived assets in any of its asset groups to become impaired. Significant differences between these estimates and actual cash flows could materially affect the Company's future financial results. If the Company determines that its goodwill or long-lived assets are impaired, it would be required to record a non-cash charge that could have a material adverse effect on its results of operations and financial position.

6. Segments and Major Customers

For the three and nine months ended September 30, 2018, MID and RSD were reportable segments as each of them met the quantitative thresholds for disclosure as a reportable segment. The results of the remaining operating segments were shown under “Other.”

The Company evaluates the performance of its segments based on segment operating income (loss), which is defined as revenue minus segment operating expenses. Segment operating expenses are comprised of direct operating expenses.

Segment operating expenses do not include sales, general and administrative expenses and the allocation of certain expenses managed at the corporate level, such as stock-based compensation, amortization, and certain bonus and acquisition costs. The “Reconciling Items” category includes these unallocated sales, general and administrative expenses as well as corporate level expenses.

The tables below present reported segment operating income (loss) for the three and nine months ended September 30, 2018 and 2017, respectively.

	For the Three Months Ended September 30, 2018				For the Nine Months Ended September 30, 2018			
	MID	RSD	Other	Total	MID	RSD	Other	Total
	(In thousands)				(In thousands)			
Revenues	$44,737	$15,017	$—	$59,754	$113,702	$46,495	$2,441	$162,638
Segment operating expenses	27,035	12,538	3,154	42,727	72,581	40,216	11,994	124,791
Segment operating income (loss)	$17,702	$2,479	$(3,154)	$17,027	$41,121	$6,279	$(9,553)	$37,847
Reconciling items				(36,194)				(120,614)
Operating loss				$(19,167)				$(82,767)
Interest and other income (expense), net				4,032				12,342
Loss before income taxes				$(15,135)				$(70,425)

20

Table of Contents

	For the Three Months Ended September 30, 2017				For the Nine Months Ended September 30, 2017			
	MID	RSD	Other	Total	MID	RSD	Other	Total
	(In thousands)				(In thousands)			
Revenues	$68,787	$26,312	$4,035	$99,134	$206,784	$72,883	$11,538	$291,205
Segment operating expenses	21,130	11,796	7,802	40,728	65,187	36,409	25,191	126,787
Segment operating income (loss)	$47,657	$14,516	$(3,767)	$58,406	$141,597	$36,474	$(13,653)	$164,418
Reconciling items				(41,396)				(125,730)
Operating income				$17,010				$38,688
Interest and other income (expense), net				(3,079)				(9,263)
Income before income taxes				$13,931				$29,425

The Company’s CODM does not review information regarding assets on an operating segment basis. Additionally, the Company does not record intersegment revenue or expense.

Accounts receivable from the Company's major customers representing 10% or more of total accounts receivable at September 30, 2018 and December 31, 2017, respectively, was as follows:

Customer	As of September 30, 2018	December 31, 2017
Customer 1 (MID reportable segment)	12 %	*
Customer 2 (RSD reportable segment)	*	11 %
Customer 3 (Other segment)	*	12 %
Customer 4 (MID and RSD reportable segment)	*	13 %
Customer 5 (MID and RSD reportable segment)	43 %	*

* Customer accounted for less than 10% of total accounts receivable in the period

Revenue from the Company’s major customers representing 10% or more of total revenue for the three and nine months ended September 30, 2018 and 2017, respectively, was as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
Customer	2018	2017	2018	2017
Customer A (MID and RSD reportable segments)	*	18 %	*	17 %
Customer B (MID reportable segment)	*	12 %	*	13 %
Customer C (MID reportable segment)	*	13 %	*	13 %
Customer D (MID reportable segment)	13 %	*	*	*
Customer E (MID and RSD reportable segments)	*	*	11 %	*
Customer F (MID and RSD reportable segments)	34 %	*	13 %	*

* Customer accounted for less than 10% of total revenue in the period

Table of Contents

Revenue from customers in the geographic regions based on the location of contracting parties was as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
(In thousands)	2018	2017	2018	2017
Taiwan	$ 3,962	$ 1,392	$ 20,419	$ 7,410
South Korea	388	29,476	10,656	86,736
USA	37,899	43,532	78,983	123,115
Japan	3,889	4,933	20,201	18,508
Europe	4,156	9,160	11,628	17,850
Canada	820	933	4,115	3,353
Singapore	7,953	4,927	14,103	17,563
Asia-Other	687	4,781	2,533	16,670
Total	$ 59,754	$ 99,134	$ 162,638	$ 291,205

7. Marketable Securities

Rambus invests its excess cash and cash equivalents primarily in U.S. government-sponsored obligations, commercial paper, corporate notes and bonds, money market funds and municipal notes and bonds that mature within three years. As of September 30, 2018 and December 31, 2017, all of the Company’s cash equivalents and marketable securities had a remaining maturity of less than one year.

All cash equivalents and marketable securities are classified as available-for-sale. Total cash, cash equivalents and marketable securities are summarized as follows:

	As of September 30, 2018				
(In thousands)	Fair Value	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Weighted Rate of Return
Money market funds	$ 10,838	$ 10,838	$ —	$ —	1.95 %
U.S. Government bonds and notes	24,989	24,990	—	(1)	1.86 %
Corporate notes, bonds, commercial paper and other	163,929	164,024	—	(95)	2.16 %
Total cash equivalents and marketable securities	199,756	199,852	—	(96)	
Cash	48,415	48,415	—	—	
Total cash, cash equivalents and marketable securities	$ 248,171	$ 248,267	$ —	$ (96)	

	As of December 31, 2017				
(In thousands)	Fair Value	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Weighted Rate of Return
Money market funds	$ 10,915	$ 10,915	$ —	$ —	1.16 %
U.S. Government bonds and notes	55,220	55,221	—	(1)	1.12 %
Corporate notes, bonds, commercial paper and other	195,073	195,204	—	(131)	1.39 %
Total cash equivalents and marketable securities	261,208	261,340	—	(132)	
Cash	68,168	68,168	—	—	
Total cash, cash equivalents and marketable securities	$ 329,376	$ 329,508	$ —	$ (132)	

Table of Contents

Available-for-sale securities are reported at fair value on the balance sheets and classified as follows:

	As of September 30, 2018	December 31, 2017
	(In thousands)	
Cash equivalents	$86,119	$ 157,676
Short term marketable securities	113,637	103,532
Total cash equivalents and marketable securities	199,756	261,208
Cash	48,415	68,168
Total cash, cash equivalents and marketable securities	$248,171	$ 329,376

The Company continues to invest in highly rated quality, highly liquid debt securities. As of September 30, 2018, these securities have a remaining maturity of less than one year. The Company holds all of its marketable securities as available-for-sale, marks them to market, and regularly reviews its portfolio to ensure adherence to its investment policy and to monitor individual investments for risk analysis, proper valuation, and unrealized losses that may be other than temporary.

The estimated fair value of cash equivalents and marketable securities classified by the length of time that the securities have been in a continuous unrealized loss position at September 30, 2018 and December 31, 2017 are as follows:

	Fair Value		Gross Unrealized Loss	
	September 30, 2018	December 31, 2017	September 30, 2018	December 31, 2017
	(In thousands)			
Less than one year				
U.S. Government bonds and notes	$24,989	$ 42,581	$ (1)	$ (1)
Corporate notes, bonds and commercial paper	163,929	194,015	(95)	(131)
Total Corporate notes, bonds, and commercial paper and U.S. Government bonds and notes	$188,918	$ 236,596	$ (96)	$ (132)

The gross unrealized loss at September 30, 2018 and December 31, 2017 was not material in relation to the Company's total available-for-sale portfolio. The gross unrealized loss can be primarily attributed to a combination of market conditions as well as the demand for and duration of the U.S. government-sponsored obligations and corporate notes and bonds. There is no need to sell these investments, and the Company believes that it can recover the amortized cost of these investments. The Company has found no evidence of impairment due to credit losses in its portfolio. Therefore, these unrealized losses were recorded in other comprehensive income. However, the Company cannot provide any assurance that its portfolio of cash, cash equivalents and marketable securities will not be impacted by adverse conditions in the financial markets, which may require the Company in the future to record an impairment charge for credit losses which could adversely impact its financial results.
See Note 8, "Fair Value of Financial Instruments," for discussion regarding the fair value of the Company's cash equivalents and marketable securities.

Table of Contents

8. Fair Value of Financial Instruments

The following table presents the financial instruments that are carried at fair value and summarizes the valuation of its cash equivalents and marketable securities by the above pricing levels as of September 30, 2018 and December 31, 2017:

	As of September 30, 2018			
	Total	Quoted Market Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
	(In thousands)			
Money market funds	$10,838	$ 10,838	$ —	$ —
U.S. Government bonds and notes	24,989	—	24,989	—
Corporate notes, bonds, commercial paper and other	163,929	—	163,929	—
Total available-for-sale securities	$199,756	$ 10,838	$ 188,918	$ —

	As of December 31, 2017			
	Total	Quoted Market Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
	(In thousands)			
Money market funds	$10,915	$ 10,915	$ —	$ —
U.S. Government bonds and notes	55,220	—	55,220	—
Corporate notes, bonds, commercial paper and other	195,073	1,058	194,015	—
Total available-for-sale securities	$261,208	$ 11,973	$ 249,235	$ —

The Company monitors its investments for other-than-temporary impairment and records appropriate reductions in carrying value when necessary. The Company monitors its investments for other-than-temporary losses by considering current factors, including the economic environment, market conditions, operational performance and other specific factors relating to the business underlying the investment, reductions in carrying values when necessary and the Company's ability and intent to hold the investment for a period of time which may be sufficient for anticipated recovery in the market. Any other-than-temporary loss is reported under "Interest and other income (expense), net" in the condensed consolidated statement of operations.

For the three and nine months ended September 30, 2018 and 2017, there were no transfers of financial instruments between different categories of fair value.

The following table presents the financial instruments that are not carried at fair value but require fair value disclosure as of September 30, 2018 and December 31, 2017:

	As of September 30, 2018			As of December 31, 2017		
(In thousands)	Face Value	Carrying Value	Fair Value	Face Value	Carrying Value	Fair Value
1.375% Convertible Senior Notes due 2023 (the "2023 Notes")	$172,500	$140,279	$155,897	$172,500	$135,447	$173,450
1.125% Convertible Senior Notes due 2018 (the "2018 Notes")	$—	$—	$—	$81,207	$78,451	$100,802

The fair value of the convertible notes at each balance sheet date is determined based on recent quoted market prices for these notes which is a level 2 measurement. As discussed in Note 9, "Convertible Notes," as of September 30, 2018, the 2023 Notes are carried at their aggregate face value of $172.5 million, less any unamortized debt discount and unamortized debt issuance costs. The carrying value of other financial instruments, including accounts receivable, accounts payable and other liabilities, approximates fair value due to their short maturities.

Table of Contents

9. Convertible Notes

The Company’s convertible notes are shown in the following table:

(In thousands)	As of September 30, 2018	As of December 31, 2017
2023 Notes	$172,500	$172,500
2018 Notes	—	81,207
Total principal amount of convertible notes	$172,500	$253,707
Unamortized discount - 2023 Notes	(30,048)	(34,506)
Unamortized discount - 2018 Notes	—	(2,547)
Unamortized debt issuance costs - 2023 Notes	(2,173)	(2,547)
Unamortized debt issuance costs - 2018 Notes	—	(209)
Total convertible notes	$140,279	$213,898
Less current portion	—	78,451
Total long-term convertible notes	$140,279	$135,447

During the third quarter of 2018, the Company paid upon maturity the remaining $81.2 million in aggregate principal amount of the 2018 Notes. Additionally, the Company delivered 423,873 shares of the Company's common stock as settlement related to the in-the-money conversion feature of the 2018 Notes at maturity. The value of the shares delivered was approximately $5.0 million.

Interest expense related to the notes for the three and nine months ended September 30, 2018 and 2017 was as follows:

	Three Months Ended		Nine Months Ended	
	September 30,		September 30,	
	2018	2017	2018	2017
	(In thousands)			
2023 Notes coupon interest at a rate of 1.375%	$593	$—	$1,779	$—
2023 Notes amortization of discount and debt issuance costs at an additional effective interest rate of 4.9%	1,632	—	4,831	—
2018 Notes coupon interest at a rate of 1.125%	96	388	377	1,164
2018 Notes amortization of discount and debt issuance costs at an additional effective interest rate of 5.5%	559	1,801	2,756	5,324
Total interest expense on convertible notes	$2,880	$2,189	$9,743	$6,488

Table of Contents

10. Commitments and Contingencies

As of September 30, 2018, the Company's material contractual obligations were as follows (in thousands):

	Total	Remainder of 2018	2019	2020	2021	2022	Thereafter
Contractual obligations (1)							
Imputed financing obligation (2)	$11,102	$ 1,631	$6,602	$2,869	$—	$—	$—
Leases and other contractual obligations	23,844	4,932	5,518	4,558	4,683	3,291	862
Software licenses (3)	6,324	2,792	3,532	—	—	—	—
Convertible notes	172,500	—	—	—	—	—	172,500
Interest payments related to convertible notes	10,680	—	2,372	2,372	2,372	2,372	1,192
Total	$224,450	$ 9,355	$18,024	$9,799	$7,055	$5,663	$174,554

(1) The above table does not reflect possible payments in connection with uncertain tax benefits of approximately $23.7 million including $21.6 million recorded as a reduction of long-term deferred tax assets and $2.1 million in long-term income taxes payable as of September 30, 2018. As noted below in Note 13, "Income Taxes," although it is possible that some of the unrecognized tax benefits could be settled within the next 12 months, the Company cannot reasonably estimate the outcome at this time.

(2) With respect to the imputed financing obligation, the main components of the difference between the amount reflected in the contractual obligations table and the amount reflected on the unaudited condensed consolidated balance sheets are the interest on the imputed financing obligation and the estimated common area expenses over the future periods. The amount includes the amended Ohio lease and the amended Sunnyvale lease.

(3) The Company has commitments with various software vendors for agreements generally having terms longer than one year.

Building lease expense was approximately $1.3 million and $3.8 million for the three and nine months ended September 30, 2018, respectively. Building lease expense was approximately $1.2 million and $3.2 million for the three and nine months ended September 30, 2017, respectively. Deferred rent of $1.5 million and $0.5 million as of September 30, 2018 and December 31, 2017, respectively, was included in other liabilities.

Indemnification

From time to time, the Company indemnifies certain customers as a necessary means of doing business. Indemnification covers customers for losses suffered or incurred by them as a result of any patent, copyright, or other intellectual property infringement or any other claim by any third party arising as result of the applicable agreement with the Company. The Company generally attempts to limit the maximum amount of indemnification or liability that the Company could be exposed to under these agreements, however, this is not always possible. The fair value of the liability as of September 30, 2018 and December 31, 2017 is not material.

11. Equity Incentive Plans and Stock-Based Compensation

As of September 30, 2018, 10,076,069 shares of the 35,400,000 cumulative shares approved under both the current 2015 Equity Incentive Plan (the "2015 Plan") and past 2006 Equity Incentive Plan (the "2006 Plan") remain available for grant, which included an increase of 4,000,000 shares approved under the 2015 Plan. On April 23, 2015, the Company's stockholders approved the 2015 Plan, which authorizes 4,000,000 shares for future issuance plus the number of shares that remained available for grant under the 2006 Plan as of the effective date of the 2015 Plan. The 2015 Plan became effective and replaced the 2006 Plan on April 23, 2015. The 2015 Plan was the Company's only plan for providing stock-based incentive awards to eligible employees, executive officers, non-employee directors and consultants as of September 30, 2018. No further awards will be made under the 2006 Plan, but the 2006 Plan will continue to govern awards previously granted under it. In addition, any shares subject to stock options or other awards granted under the 2006 Plan that on or after the effective date of the 2015 Plan are forfeited, cancelled, exchanged or surrendered or terminate under the 2006 Plan will become available for grant under the 2015 Plan. Also, on April 26, 2018, the Company's stockholders approved an additional 5,500,000 shares for issuance under the 2015 Plan.

Table of Contents

A summary of shares available for grant under the Company’s plans is as follows:

	Shares Available for Grant
Shares available as of December 31, 2017	5,051,147
Increase in shares approved for issuance	5,500,000
Stock options granted	(711,479)
Stock options forfeited	875,417
Nonvested equity stock and stock units granted (1) (2)	(4,630,283)
Nonvested equity stock and stock units forfeited (1)	3,991,267
Total available for grant as of September 30, 2018	10,076,069

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(1) For purposes of determining the number of shares available for grant under the 2015 Plan against the maximum number of shares authorized, each share of restricted stock granted reduces the number of shares available for grant by 1.5 shares and each share of restricted stock forfeited increases shares available for grant by 1.5 shares.

(2) Amount includes 525,965 shares that have been reserved for potential future issuance related to certain performance unit awards granted in the first quarter of 2018 and discussed under the section titled "Nonvested Equity Stock and Stock Units" below.

General Stock Option Information

The following table summarizes stock option activity under the 2006 Plan and 2015 Plan for the nine months ended September 30, 2018 and information regarding stock options outstanding, exercisable, and vested and expected to vest as of September 30, 2018.

	Options Outstanding			
	Number of Shares	Weighted Average Exercise Price Per Share	Weighted Average Remaining Contractual Term (years)	Aggregate Intrinsic Value
	(In thousands, except per share amounts)			
Outstanding as of December 31, 2017	4,310,361	$ 9.78		
Options granted	711,479	$ 12.84		
Options exercised	(877,436)	$ 6.71		
Options forfeited	(875,417)	$ 13.73		
Outstanding as of September 30, 2018	3,268,987	$ 10.21	4.25	$ 6,220
Vested or expected to vest at September 30, 2018	3,232,308	$ 10.19	4.20	$ 6,220
Options exercisable at September 30, 2018	2,625,887	$ 9.61	3.11	$ 6,220

No stock options that contain a market condition were granted during the three and nine months ended September 30, 2018 and 2017. As of September 30, 2018 and December 31, 2017, there were no stock options outstanding that require the Company to achieve minimum market conditions in order for the options to become exercisable.

The aggregate intrinsic value in the table above represents the total pre-tax intrinsic value for in-the-money options at September 30, 2018, based on the $10.91 closing stock price of Rambus’ common stock on September 28, 2018 on the NASDAQ Global Select Market, which would have been received by the option holders had all option holders exercised their options as of that date. The total number of in-the-money options outstanding and exercisable as of September 30, 2018 was 1,611,633 and 1,611,633, respectively.

Employee Stock Purchase Plan

Under the 2015 Employee Stock Purchase Plan ("2015 ESPP"), the Company issued 297,497 shares at a price of $11.66 per share during the nine months ended September 30, 2018. Under the 2015 ESPP, the Company issued 361,994 shares at a price of $10.33 per share during the nine months ended September 30, 2017. On April 26, 2018, the Company's stockholders

27

Table of Contents

approved an additional 2,000,000 shares to be reserved for issuance under the 2015 ESPP. As of September 30, 2018, 2,538,776 shares under the 2015 ESPP remain available for issuance.

Stock-Based Compensation

For the nine months ended September 30, 2018 and 2017, the Company maintained stock plans covering a broad range of potential equity grants including stock options, nonvested equity stock and equity stock units and performance based instruments. During the second quarter of 2018, the Company's former chief executive officer was terminated which resulted in a reversal of stock-based compensation expense of $5.8 million during the period as he did not vest any of the awards, which were primarily related to performance unit awards and nonvested equity stock units. In addition, the Company sponsors the 2015 ESPP, whereby eligible employees are entitled to purchase common stock semi-annually, by means of limited payroll deductions, at a 15% discount from the fair market value of the common stock as of specific dates.

Stock Options

During the three months ended September 30, 2018, the Company granted 90,000 stock options with an estimated grant-date fair value of $0.4 million. During the nine months ended September 30, 2018, the Company granted 711,479 stock options with an estimated total grant-date fair value of $3.0 million. During the three and nine months ended September 30, 2018, the Company recorded stock-based compensation expense related to stock options of $0.4 million and $1.4 million, respectively.

During the three months ended September 30, 2017, the Company did not grant any stock options. During the nine months ended September 30, 2017, the Company granted 498,426 stock options with an estimated grant-date fair value of $2.1 million. During the three and nine months ended September 30, 2017, the Company recorded stock-based compensation expense related to stock options of $0.7 million and $2.1 million, respectively.

As of September 30, 2018, there was $4.4 million of total unrecognized compensation cost, net of expected forfeitures, related to non-vested stock-based compensation arrangements granted under the stock option plans. That cost is expected to be recognized over a weighted-average period of 2.9 years. The total fair value of shares vested as of September 30, 2018 was $12.8 million.

The total intrinsic value of options exercised was $3.2 million and $5.3 million for the three and nine months ended September 30, 2018, respectively. The total intrinsic value of options exercised was $1.9 million and $5.7 million for the three and nine months ended September 30, 2017, respectively. Intrinsic value is the total value of exercised shares based on the price of the Company’s common stock at the time of exercise less the cash received from the employees to exercise the options.

During the nine months ended September 30, 2018, net proceeds from employee stock option exercises totaled approximately $5.9 million.

Employee Stock Purchase Plan

For the three and nine months ended September 30, 2018, the Company recorded compensation expense related to the 2015 ESPP of $0.3 million and $1.1 million, respectively. For the three and nine months ended September 30, 2017, the Company recorded compensation expense related to the 2015 ESPP of $0.4 million and $1.3 million, respectively.

As of September 30, 2018, there was $0.1 million of total unrecognized compensation cost related to stock-based compensation arrangements granted under the 2015 ESPP. That cost is expected to be recognized over one month.

No tax benefits were realized as a result of employee stock option exercises, stock purchase plan purchases, and vesting of equity stock and stock units for the three months ended September 30, 2018 calculated in accordance with accounting for share-based payments due to the Company's full U.S. valuation allowance. For the nine months ended September 30, 2018, there were $0.3 million in tax benefits calculated in accordance with accounting for share-based payments which were realized as a result of employee stock option exercises, stock purchase plan purchases, and vesting of equity stock and stock units. Tax benefits realized as a result of employee stock option exercises, stock purchase plan purchases, and vesting of equity stock and stock units for the three and nine months ended September 30, 2017 were $0.2 million and $0.8 million, respectively.

Valuation Assumptions

The fair value of stock awards is estimated as of the grant date using the Black-Scholes-Merton (“BSM”) option-pricing model assuming a dividend yield of 0% and the additional weighted-average assumptions as listed in the table below.

Table of Contents

The following table presents the weighted-average assumptions used to estimate the fair value of stock options granted that contain only service conditions in the periods presented.

	Stock Option Plan		
	Three Months Ended	Nine Months Ended	
	September 30,	September 30,	
	2018	2018	2017
Stock Option Plan			
Expected stock price volatility	32 %	24% - 32%	32 %
Risk free interest rate	2.8 %	2.6% - 2.8%	1.8% - 1.9%
Expected term (in years)	5.8	5.8	5.3 - 5.4
Weighted-average fair value of stock options granted to employees	$4.34	$4.23	$4.12

There were no stock options granted during the three months ended September 30, 2017.

	Employee Stock Purchase Plan	
	Nine Months Ended	
	September 30,	
	2018	2017
Employee Stock Purchase Plan		
Expected stock price volatility	27 %	27 %
Risk free interest rate	2.05 %	0.98 %
Expected term (in years)	0.5	0.5
Weighted-average fair value of purchase rights granted under the purchase plan	$3.14	$2.87

Nonvested Equity Stock and Stock Units

The Company grants nonvested equity stock units to officers, employees and directors. During the three and nine months ended September 30, 2018, the Company granted nonvested equity stock units totaling 333,909 and 2,736,212 shares under the 2015 Plan, respectively. During the three and nine months ended September 30, 2017, the Company granted nonvested equity stock units totaling 463,346 and 2,654,508 shares under the 2015 Plan. These awards have a service condition, generally a service period of four years, except in the case of grants to directors, for which the service period is 1 year. For the three and nine months ended September 30, 2018, the nonvested equity stock units were valued at the date of grant giving them a fair value of approximately $4.1 million and $35.6 million, respectively. For the three and nine months ended September 30, 2017, the nonvested equity stock units were valued at the date of grant giving them a fair value of approximately $6.0 million and $34.1 million, respectively. During the first quarters of 2018 and 2017, the Company granted performance unit awards to certain Company executive officers with vesting subject to the achievement of certain performance conditions. The ultimate number of performance units that can be earned can range from 0% to 200% of target depending on performance relative to target over the applicable period. The shares earned will vest on the third anniversary of the date of grant. The Company's shares available for grant have been reduced to reflect the shares that could be earned at the maximum target.

During the three and nine months ended September 30, 2018, the Company recorded expense of $0.5 million and a net reversal of $2.1 million, respectively, of stock-based compensation expense related to all outstanding nonvested performance unit awards. The net reversal was primarily due to the termination of the Company's former chief executive officer during the second quarter of 2018. During the three and nine months ended September 30, 2017, the Company recorded $1.2 million and $3.1 million, respectively, of stock-based compensation expense related to all outstanding nonvested performance unit awards.

For the three and nine months ended September 30, 2018, the Company recorded stock-based compensation expense of approximately $5.5 million and $13.0 million, respectively, related to all outstanding nonvested equity stock grants. For the three and nine months ended September 30, 2017, the Company recorded stock-based compensation expense of approximately $5.9 million and $16.7 million, respectively, related to all outstanding nonvested equity stock grants. Unrecognized stock-based compensation related to all nonvested equity stock grants, net of estimated forfeitures, was approximately $40.0 million at September 30, 2018. This amount is expected to be recognized over a weighted average period of 2.5 years.

Table of Contents

The following table reflects the activity related to nonvested equity stock and stock units for the nine months ended September 30, 2018:

Nonvested Equity Stock and Stock Units	Shares	Weighted-Average Grant-Date Fair Value
Nonvested at December 31, 2017	5,861,349	$ 12.68
Granted	2,736,212	$ 13.00
Vested	(1,381,795)	$ 12.36
Forfeited	(2,027,435)	$ 12.97
Nonvested at September 30, 2018	5,188,331	$ 12.83

12. Stockholders' Equity
Share Repurchase Program
During the nine months ended September 30, 2018, the Company repurchased shares of its common stock under its share repurchase program as discussed below.
On January 21, 2015, the Company's Board approved a share repurchase program authorizing the repurchase of up to an aggregate of 20.0 million shares. Share repurchases under the plan may be made through the open market, established plans or privately negotiated transactions in accordance with all applicable securities laws, rules, and regulations. There is no expiration date applicable to the plan.
On March 5, 2018, the Company initiated an accelerated share repurchase program with Citibank N.A. The accelerated share repurchase program is part of the broader share repurchase program previously authorized by the Company's Board on January 21, 2015. Under the accelerated share repurchase program, the Company pre-paid to Citibank N.A., the $50.0 million purchase price for its common stock and, in turn, the Company received an initial delivery of approximately 3.1 million shares of its common stock from Citibank N.A., in the first quarter of 2018, which were retired and recorded as a $40.0 million reduction to stockholders' equity. The remaining $10.0 million of the initial payment was recorded as a reduction to stockholders' equity as an unsettled forward contract indexed to the Company's stock. During the second quarter of 2018, the accelerated share repurchase program was completed and the Company received an additional 0.7 million shares of its common stock as the final settlement of the accelerated share repurchase program.

As of September 30, 2018, there remained an outstanding authorization to repurchase approximately 3.6 million shares of the Company's outstanding common stock under the current share repurchase program.

The Company records stock repurchases as a reduction to stockholders' equity. The Company records a portion of the purchase price of the repurchased shares as an increase to accumulated deficit when the price of the shares repurchased exceeds the average original proceeds per share received from the issuance of common stock. During the nine months ended September 30, 2018, the cumulative price of $37.5 million was recorded as an increase to accumulated deficit.

13. Income Taxes
On December 22, 2017, the "Tax Cuts & Jobs Act" (hereafter referred to as "U.S. tax reform") was signed into law and is effective for the Company starting in the quarter ended December 31, 2017. The TCJA provides for numerous significant tax law changes and modifications including the reduction of the U.S. federal corporate income tax rate from 35% to 21%, the requirement for companies to pay a one-time transition tax on earnings of certain foreign subsidiaries that were previously deferred and the creation of new taxes on certain foreign-sourced earnings. The impact on income taxes due to change in legislation is required under the authoritative guidance of Accounting Standards Codification ("ASC") 740, Income Taxes, to be recognized in the period in which the law is enacted.

In December 2017, the SEC staff issued Staff Accounting Bulletin No. 118, Income Tax Accounting Implications of the Tax Cuts and Jobs Act (SAB 118), which allows the Company to record provisional amounts for the Tax Act during a measurement period not to extend beyond one year of the enactment date. The Company has recorded material provisional tax effects in the period of enactment due to the change in legislation. For the three months ended September 30, 2018, the Company did not have significant adjustments to its provisional amounts previously recognized. The Company expects that the provisions of the

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Table of Contents

Tax Act will be clarified by additional analysis and regulatory guidance. The Company will continue its analysis of these provisional amounts, which are still subject to change during the measurement period, and the Company anticipates further guidance on accounting interpretations from the FASB and application of the law from the Department of the Treasury.

With respect to the GILTI provisions specific, the 2017 Tax Act allows companies to make an accounting policy election to either (i) account for GILTI as a component of tax expense in the period in which the entity is subject to the rules or (ii) account for GILTI in the entity’s measurement of deferred taxes. The Company's selection of an accounting policy will depend, in part, on analyzing its global income to determine whether it expects to have future U.S. inclusions in taxable income related to GILTI and, if so, the impact that is expected. As there is still factual uncertainty around the future GILTI profile of the Company, the Company is not yet able to make its accounting policy election. Therefore, the Company has not recorded any deferred tax effects related to GILTI for the nine months ended September 30, 2018.

The Company recorded a provision for income taxes of $89.8 million and $6.2 million for the three months ended September 30, 2018 and 2017, respectively, and $85.5 million and $16.1 million for the nine months ended September 30, 2018 and 2017, respectively. The provision for income taxes for the three and nine months ended September 30, 2018 was primarily comprised of the valuation allowance recorded on U.S. deferred tax assets. The income taxes for the three and nine months ended September 30, 2017 was primarily comprised of the Company's U.S. federal, state and foreign taxes and income tax expense recognized from exercises and expiration of out-of-the-money fully vested shares from equity incentive plans.

During the three and nine months ended September 30, 2018, the Company paid withholding taxes of $5.1 million and $16.2 million, respectively. During the three and nine months ended September 30, 2017, the Company paid withholding taxes of $4.7 million and $15.6 million, respectively.

As of September 30, 2018, the Company’s unaudited condensed consolidated balance sheets included net deferred tax assets, before valuation allowance, of approximately $152.3 million, which consists of net operating loss carryovers, tax credit carryovers, amortization, employee stock-based compensation expenses and certain liabilities.
The Company periodically evaluates the realizability of its net deferred tax assets based on all available evidence, both positive and negative. During the third quarter of 2018, the Company assessed the changes in its underlying facts and circumstances and evaluated the realizability of its existing deferred tax assets based on all available evidence, both positive and negative, and the weight accorded to each, and concluded a full valuation allowance associated with U.S. federal and state deferred tax assets was appropriate. The basis for this conclusion was derived primarily from the fact that the Company completed its forecasting process during the third quarter of 2018. At a domestic level, losses are expected in future periods in part due to the impact of the adoption of ASC 606. In addition, the decrease in the U.S. federal tax rate from 35% to 21% as a result of U.S. tax reform has further reduced the Company's ability to utilize its deferred tax assets. In light of the above factors, the Company concluded that it is not more likely than not that it can realize its U.S. deferred tax assets. As such, during the third quarter of 2018, the Company recorded an additional valuation allowance of $87.2 million through the consolidated financial statements, which represents a full valuation allowance against its U.S. federal and state deferred tax assets.
The Company has U.S. federal deferred tax assets related to research and development credits, foreign tax credits and other tax attributes that can be used to offset federal taxable income in future periods. These credit carryforwards will expire if they are not used within certain time periods. It is possible that some or all of these attributes could ultimately expire unused.
As of September 30, 2018, the Company has a total valuation allowance of $165.1 million on U.S. federal, state and foreign deferred tax assets, resulting in net deferred tax liability of $12.8 million.
The Company maintains liabilities for uncertain tax positions within its long-term income taxes payable accounts and as a reduction to existing deferred tax assets to the extent tax attributes are available to offset such liabilities. These

liabilities involve judgment and estimation and are monitored by management based on the best information available including changes in tax regulations, the outcome of relevant court cases and other information.

As of September 30, 2018, the Company had approximately $23.7 million of unrecognized tax benefits, including $21.6 million recorded as a reduction of long-term deferred tax assets and $2.1 million in long-term income taxes payable. If recognized, approximately $2.1 million would be recorded as an income tax benefit. As of December 31, 2017, the Company had $22.6 million of unrecognized tax benefits, including $20.4 million recorded as a reduction of long-term deferred tax assets and $2.2 million recorded in long-term income taxes payable.

Although it is possible that some of the unrecognized tax benefits could be settled within the next 12 months, the Company cannot reasonably estimate the outcome at this time.

Table of Contents

The Company recognizes interest and penalties related to uncertain tax positions as a component of the income tax provision. At September 30, 2018 and December 31, 2017, an immaterial amount of interest and penalties is included in long-term income taxes payable.

Rambus files income tax returns for the U.S., California, India, the U.K., the Netherlands and various other state and foreign jurisdictions. The U.S. federal returns are subject to examination from 2014 and forward. The California returns are subject to examination from 2010 and forward. In addition, any research and development credit carryforward or net operating loss carryforward generated in prior years and utilized in these or future years may also be subject to examination. The India returns are subject to examination from fiscal year ending March 2012 and forward. The Company is currently under examination by the IRS for the 2015 tax year and California for the 2010 and 2011 tax years. The Company’s India subsidiary is under examination by the Indian tax administration for tax years beginning with 2011, except for 2014, which was assessed in the Company's favor. The Company’s France subsidiary is under examination by the French tax agency for the 2013 to 2017 tax years. These examinations may result in proposed adjustments to the income taxes as filed during these periods. Management regularly assesses the likelihood of outcomes resulting from income tax examinations to determine the adequacy of their provision for income taxes and believes their provision for unrecognized tax benefits is adequate.

Additionally, the Company's future effective tax rates could be adversely affected by earnings being higher than anticipated in countries where the Company has higher statutory rates or lower than anticipated in countries where it has lower statutory rates, by changes in valuation of its deferred tax assets and liabilities or by changes in tax laws or interpretations of those laws.

14. Litigation and Asserted Claims

Rambus is not currently a party to any material pending legal proceeding; however, from time to time, Rambus may become involved in legal proceedings or be subject to claims arising in the ordinary course of its business. Although the results of litigation and claims cannot be predicted with certainty, the Company currently believes that the final outcome of these ordinary course matters will not have a material adverse effect on our business, operating results, financial position or cash flows. Regardless of the outcome, litigation can have an adverse impact on the Company because of defense and settlement costs, diversion of management attention and resources and other factors.

The Company records a contingent liability when it is probable that a loss has been incurred and the amount is reasonably estimable in accordance with accounting for contingencies.

Table of Contents

15. Restructuring Charges

The 2018 Plan

On January 30, 2018, the Company announced its plans to close its lighting division and manufacturing operations in Brecksville, Ohio ("the 2018 Plan"). The Company believes that such business is not core to its strategy and growth objectives. In connection therewith, the Company has terminated approximately fifty employees, and began the process to exit the facilities in Ohio and sell the related equipment. The Company expected to record restructuring charges of approximately $2 million to $5 million related to employee terminations and severance costs, and facility related costs. No additional charges were recorded by the Company during the three months ended September 30, 2018. During the nine months ended September 30, 2018, the Company recorded a net charge of $2.2 million, related primarily to the reduction in workforce, of which $2.0 million was related to the Other segment and $0.2 million was related to corporate support functions. The 2018 Plan is expected to be substantially completed by the end of 2018.

The following table summarizes the 2018 Plan restructuring activities during the nine months ended September 30, 2018:

	Employee Severance and Related Benefits	Facilities and Other	Total
	(In thousands)		
Balance at December 31, 2017	$—	$ —	$—
Charges	2,234	1,178	3,412
Payments	(2,055)	(217)	(2,272)
Non-cash settlements	—	(670) *	(670)
Balance at September 30, 2018	$179	$ 291	$470

*The non-cash charge of $0.7 million is primarily related to the write down of fixed assets and inventory related to the Other segment.

The Company concluded that the closure of its lighting division did not meet the criteria for reporting in discontinued operations in accordance with ASC 360, "Property, Plant, and Equipment". Consequently, the lighting division's long-lived assets were reclassified as held for sale. As of September 30, 2018, the Company sold all property, plant and equipment from its lighting division reclassified as held for sale on the condensed consolidated balance sheets of approximately $3.5 million and recognized a gain on the disposal of the held for sale assets of approximately $1.2 million included in restructuring charges on the condensed consolidated statements of operations.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

This report contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934 as described in more detail under "Note Regarding Forward-Looking Statements." Our forward-looking statements are based on current expectations, forecasts and assumptions and are subject to risks, uncertainties and changes in condition, significance, value and effect. As a result of the factors described herein, and in the documents incorporated herein by reference, including, in particular, those factors described under "Risk Factors," we undertake no obligation to publicly disclose any revisions to these forward-looking statements to reflect events or circumstances occurring subsequent to filing this report with the Securities and Exchange Commission.

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33

Table of Contents

Executive Summary

During the third quarter of 2018, we had new and renewed licenses closed with Socionext, Phison, Infineon and Nvidia. We also continued commercial traction with new customers and partners including Coles, ScotRail, Visa, American Express and Riscure. Key 2018 third quarter financial results included:

- Revenue of $59.8 million;
- Total operating costs and expenses of $78.9 million;
- Diluted net loss per share of $0.97;
- Cash flows provided by operating activities of approximately $31.6 million; and
- Unbilled receivables of $699.9 million as of September 30, 2018.

Business Overview

Dedicated to making data faster and safer, Rambus creates innovative hardware, software and services that drive technology advancements from the data center to the mobile edge. Our architecture licenses, IP cores, chips, software, and services span memory and interfaces, security, and emerging technologies to positively impact the modern world. We collaborate with the industry, partnering with leading chip and system designers, foundries, and service providers. Integrated into a wide array of devices and systems, our products power and secure diverse applications, including Big Data, Internet of Things (IoT) security, mobile payments, and smart ticketing.

Building upon the foundation of technologies for memory, SerDes and other chip interfaces, we have expanded our portfolio of inventions and solutions to address chip and system security, mobile payments and smart ticketing. We intend to continue our growth into new technology fields, consistent with our mission to create value through our innovations and to make those technologies available through the shipment of products, the delivery of services, and licensing business models. Key to our efforts is continuing to hire and retain world-class inventors, scientists and engineers to lead the development and deployment of inventions and technology solutions for our fields of focus.

Our strategy is to continue to augment our patent license business model to provide additional technology, products and services while creating and leveraging strategic synergies to increase revenue. In support of our strategy, Rambus has transitioned to focus on two key high-growth markets - the data center and the mobile edge - with an approach and product roadmap that leverage our core competencies and supplement with ingredient components to both differentiate and accelerate our position in complementary markets.

Organization

We have organized the business into three operational units: (1) Memory and Interfaces, or MID, which focuses on the design, development, manufacturing through partnerships and licensing of technology and solutions that is related to memory and interfaces; (2) Rambus Security, or RSD, which focuses on the design, development, deployment and licensing of technologies for chip, system and in-field application security, anti-counterfeiting, smart ticketing and mobile payments; and (3) Emerging Solutions, or ESD, which includes the Rambus Labs team and the development efforts in the area of emerging technologies.

On January 30, 2018, we announced our plans to close our lighting division (RLD) including related manufacturing operations in Brecksville, Ohio. We believe that such business is not core to our strategy and growth objectives. Refer to Note 15, “Restructuring Charges” of Notes to Unaudited Condensed Consolidated Financial Statements of this Form 10-Q for additional details.

As of September 30, 2018, MID and RSD met quantitative thresholds for disclosure as reportable segments. Results for the remaining operating segments were shown under “Other.” For additional information concerning segment reporting, see Note 6, “Segments and Major Customers,” of Notes to Unaudited Condensed Consolidated Financial

Statements of this Form 10-Q.

Revenue Sources

On January 1, 2018, we adopted ASU No. 2014-09, Revenue from Contracts with Customers in Accounting Standards Codification (ASC) Topic 606 ("ASC 606", "the New Revenue Standard") and all the related amendments using the modified retrospective method. We recognized the cumulative effect of initially applying the New Revenue Standard of $626 million as an adjustment to the opening balance of accumulated deficit as of January 1, 2018. The prior period comparative information

Table of Contents

has not been restated and continues to be reported under ASC Topic 605, "Revenue Recognition" ("ASC 605") which was the accounting standards in effect for those periods.

The most significant impacts of the New Revenue Standard relate to the following:

- Revenue recognized for certain patent and technology licensing arrangements has changed under the New Revenue Standard. Revenue for (i) fixed-fee arrangements (including arrangements that include minimum guaranteed amounts), (ii) variable royalty arrangements that we have concluded are fixed in substance and (iii) the fixed portion of hybrid fixed/variable arrangements is recognized upon control over the underlying intellectual property ("IP") use right transferring to the licensee rather than upon billing under ASC 605, net of the effect of significant financing components calculated using customer-specific, risk-adjusted lending rates and recognized over time on an effective rate basis. As a consequence of the acceleration of revenue recognition and for matching purposes, all withholding taxes to be paid over the term of these licensing arrangements were expensed on the date the licensing revenue was recognized.

- Adoption of the New Revenue Standard resulted in revenue recognition being accelerated for variable royalties and the variable portion of hybrid fixed/variable patent and technology licensing arrangements. Under the New Revenue Standard, royalty revenue is being recognized on the basis of management's estimates of sales or usage, as applicable, of the licensed IP in the period of reference, with a true-up being recorded in subsequent periods based on actual sales or usage as reported by licensees (rather than upon receiving royalty reports from licensees as was the case under ASC 605).

- Adoption of the New Revenue Standard also resulted in revenue recognition being accelerated for certain professional services arrangements, including arrangements consisting of significant software customization or modification and development arrangements. Under the New Revenue Standard, such arrangements are accounted for based on man-days incurred during the reporting period as compared to estimated total man-days necessary for contract completion, as the customer either controls the asset as it is created or enhanced by us or, where the asset has no alternative use to us, we are entitled to payment for performance to date and expect to fulfill the contract. Revenue recognition is no longer capped to the lesser of inputs in the period or accepted billable project milestones as was the case under ASC 605.

Our inventions and technology solutions are offered to our customers through patent, technology, software and IP core licenses, as well as product sales and services. Today, our primary source of revenue is derived from patent licenses, through which we provide our customers a license to use a certain portion of our broad portfolio of patented inventions. The license provides our customers with a defined right to use our innovations in the customer's own digital electronics products, systems or services, as applicable. The licenses may also define the specific field of use where our customers may use or employ our inventions in their products. License agreements are structured with fixed, variable or a hybrid of fixed and variable royalty payments over certain defined periods ranging for periods of up to ten years. Leading consumer product, industrial, semiconductor and system companies such as AMD, Broadcom, Cisco, Freescale, Fujitsu, IBM, Intel, Micron, Nanya, NVIDIA, Panasonic, Qualcomm, Renesas, Samsung, SK hynix, STMicroelectronics, Toshiba and Xilinx have licensed our patents. The vast majority of our patents were secured through our internal research and development efforts across all of our business units.

We also offer our customers technology licenses to support the implementation and adoption of our technology in their products or services. Our customers include leading companies such as IBM, Panasonic, Qualcomm, Samsung, Sony and Toshiba. Our technology license offerings include a range of technologies for incorporation into our customers' products and systems. We also offer a range of services as part of our technology licenses which can include know-how and technology transfer, product design and development, system integration, and other services. These technology license agreements may have both a fixed price (non-recurring) component and ongoing use fees and in some cases, royalties. Further, under technology licenses, our customers typically receive licenses to our patents necessary to implement these solutions in their products with specific rights and restrictions to the applicable

patents elaborated in their individual contracts with us.

Revenues from royalties accounted for 56% and 52% of our consolidated revenue for the three and nine months ended September 30, 2018, respectively, as compared to 73% for both the three and nine months ended September 30, 2017, respectively.

The remainder of our revenue is product revenue, contract services and other revenue, which includes our product sales, IP core licenses, software licenses and related implementation, support and maintenance fees, and engineering services fees. The timing and amounts invoiced to customers can vary significantly depending on specific contract terms and can therefore have a

Table of Contents

significant impact on deferred revenue or account receivables in any given period. Product revenue accounted for 20% and 17% of our consolidated revenue for the three and nine months ended September 30, 2018, respectively, as compared to 9% and 10% for the three and nine months ended September 30, 2017, respectively. Contract and other revenue accounted for 24% and 31% of our consolidated revenue for the three and nine months ended September 30, 2018, respectively, as compared to 18% for both the three and nine months ended September 30, 2017.

Expenses

Cost of product revenue for the three months ended September 30, 2018 increased approximately $0.2 million as compared to the same period in 2017 primarily due to increased cost of sales associated with higher sales of memory products, offset by decreased cost of sales associated with the closure of the lighting division announced in the first quarter of 2018. Cost of product revenue for the nine months ended September 30, 2018 decreased approximately $4.0 million as compared to the same period in 2017 primarily due to decreased cost of sales associated with the closure of the lighting division announced in the first quarter of 2018, offset by increased cost of sales associated with higher sales of memory products.

Engineering expenses continue to play a key role in our efforts to maintain product innovations. Our engineering expenses for the three months ended September 30, 2018 decreased $1.6 million as compared to the same period in 2017 primarily due to decreased amortization costs of $4.8 million, offset by increased consulting costs of $1.2 million, headcount related expenses of $0.5 million, engineering development tool costs of $0.5 million, equipment maintenance costs of $0.3 million and stock-based compensation expense of $0.2 million. Engineering expenses for the nine months ended September 30, 2018 decreased $2.9 million as compared to the same period in 2017 primarily due to decreased amortization costs of $6.5 million and depreciation expense of $1.3 million, offset by increased headcount related expenses of $1.4 million, allocated information technology costs of $0.9 million, consulting expenses of $0.7 million, engineering development tool costs of $0.7 million, stock-based compensation expense of $0.6 million and bonus accrual expense of $0.5 million.

Sales, general and administrative expenses for the three months ended September 30, 2018 decreased $2.3 million as compared to the same period in 2017 primarily due to decreased stock-based compensation expense of $1.0 million primarily due to the termination of our former chief executive officer at the end of June 2018, consulting costs of $0.6 million, bonus accrual expense of $0.5 million, headcount related expenses of $0.4 million and sales and marketing costs of $0.3 million, offset by increased recruiting costs of $0.4 million and facilities costs of $0.2 million. Sales, general and administrative expenses for the nine months ended September 30, 2018 decreased $3.0 million as compared to the same period in 2017 primarily due to decreased stock-based compensation expense of $5.1 million primarily due to the termination of our former chief executive officer at the end of June 2018, consulting costs of $0.7 million, sales and marketing costs of $0.7 million and bonus accrual expense of $0.4 million, offset by increased headcount related expenses of $1.6 million, recruiting costs of $0.8 million, facilities costs of $0.7 million and accounting costs of $0.5 million.

Intellectual Property

As of September 30, 2018, our semiconductor, lighting, security and other technologies are covered by 2,117 U.S. and foreign patents. Additionally, we have 543 patent applications pending. Some of the patents and pending patent applications are derived from a common parent patent application or are foreign counterpart patent applications. We have a program to file applications for and obtain patents in the United States and in selected foreign countries where we believe filing for such protection is appropriate and would further our overall business strategy and objectives. In some instances, obtaining appropriate levels of protection may involve prosecuting continuation and counterpart patent applications based on a common parent application. We believe our patented innovations provide our customers with the ability to achieve improved performance, lower risk, greater cost-effectiveness and other benefits

in their products and services.

Trends

There are a number of trends that may have a material impact on us in the future, including but not limited to, the evolution of memory and SerDes technology, adoption of mobile payment, smart ticketing and security solutions, the use and adoption of our inventions or technologies generally, industry consolidation, and global economic conditions with the resulting impact on sales of consumer electronic systems. In addition, as discussed under "Results of Operations" below, our adoption of the New Revenue Standard will have a significant impact on our revenue trends as compared to prior periods in which we reported revenue under ASC 605.

We have a high degree of revenue concentration. Our top five customers for each reporting period represented approximately 64% and 50% of our revenue for the three and nine months ended September 30, 2018, respectively, as compared to 57% and 56% for the three and nine months ended September 30, 2017, respectively. The particular customers

36

Table of Contents

which account for revenue concentration have varied from period-to-period as a result of the addition of new contracts, expiration of existing contracts, renewals of existing contracts, industry consolidation and the volumes and prices at which the customers have recently sold to their customers. These variations are expected to continue in the foreseeable future.

Our revenue from companies headquartered outside of the United States accounted for approximately 37% and 51% of our total revenue for the three and nine months ended September 30, 2018, respectively, as compared to 56% and 58% for the three and nine months ended September 30, 2017, respectively. We expect that revenue derived from international customers will continue to represent a significant portion of our total revenue in the future. To date, the majority of the revenue from international customers has been denominated in U.S. dollars. However, to the extent that such customers' sales to their customers are not denominated in U.S. dollars, any revenue that we receive as a result of such sales could be subject to fluctuations in currency exchange rates. In addition, if the effective price of licensed products sold by our foreign customers were to increase as a result of fluctuations in the exchange rate of the relevant currencies, demand for licensed products could fall, which in turn would reduce our revenue. We do not use financial instruments to hedge foreign exchange rate risk. For additional information concerning international revenue, see Note 6, "Segments and Major Customers," of Notes to Unaudited Condensed Consolidated Financial Statements of this Form 10-Q.

Our licensing cycle for new licensees as well as renewals for existing licensees is lengthy, costly and unpredictable without any degree of certainty. We may incur costs in any particular period before any associated revenue stream begins, if at all. Our lengthy license negotiation cycles could make our future revenue difficult to predict because we may not be successful in entering into licenses with our customers in the amounts projected, or on our anticipated timelines.

The semiconductor industry is intensely competitive and highly cyclical, limiting our visibility with respect to future sales. To the extent that macroeconomic fluctuations negatively affect our principal customers, the demand for our products and technology may be significantly and adversely impacted and we may experience substantial period-to-period fluctuations in our operating results.

The royalties we receive from our semiconductor customers are partly a function of the adoption of our technologies by system companies. Many system companies purchase semiconductors containing our technologies from our customers and do not have a direct contractual relationship with us. Our customers generally do not provide us with details as to the identity or volume of licensed semiconductors purchased by particular system companies. As a result, we face difficulty in analyzing the extent to which our future revenue will be dependent upon particular system companies.

Global demand for effective security technologies continues to increase. In particular, highly integrated devices such as smart phones are increasingly used for applications requiring security such as mobile payments, corporate information and user data. Our RSD operating segment is primarily focused on positioning its DPA countermeasures, security cores, CryptoManager™ technology solutions, and the introduction of in-field applications mobile payments and smart ticketing solutions to our offerings to capitalize on these trends and growing adoption among technology partners and customers.

Cost of product revenue in the aggregate and as a percentage of revenue increased in the third quarter of 2018 as compared to the same period in the prior year. Cost of product revenue in the aggregate decreased and as a percentage of revenue increased during the nine months ended September 30, 2018 as compared to the same period in the prior year. Engineering costs in the aggregate decreased and as a percentage of revenue increased for both the three and nine months ended September 30, 2018 as compared to the same periods in the prior year. Sales, general and administrative expenses in the aggregate decreased and as a percentage of revenue increased for both the three and nine months ended September 30, 2018 as compared to the same periods in the prior year. In the near term, we expect these costs in the aggregate to be higher as we intend to continue to make investments in the infrastructure and technologies required to increase our product innovation in semiconductor, security, mobile payments, smart cards and other technologies. In addition, while we have not been involved in material litigation since 2014, to the extent

litigation is again necessary, our expectations on the amount and timing of any future general and administrative costs are uncertain.

As a part of our overall business strategy, from time to time, we evaluate businesses and technologies for potential acquisition that are aligned with our core business and designed to supplement our growth, including the acquisitions of SCS, the assets of the Snowbush IP group and the Memory Interconnect Business. Similarly, we evaluate our current businesses and technologies that are not aligned with our core business for potential divestiture.

Results of Operations

On January 1, 2018, we adopted ASC 606. Consistent with the modified retrospective adoption method, our results of operations for periods prior to our adoption of ASC 606 remain unchanged as revenue for the three and nine months ended September 30, 2017 was recognized under ASC 605. Therefore, the periods are not directly comparable.

Table of Contents

The adoption of ASC 606 limits the comparability of revenue and certain expenses presented in the results of operations for the three and nine months ended September 30, 2018, when compared to the three and nine months ended September 30, 2017. For additional information on the impact of the new accounting standard on our revenue, see Note 2, "Recent Accounting Pronouncements," of Notes to Unaudited Condensed Consolidated Financial Statements of this Form 10-Q.

The following table sets forth, for the periods indicated, the percentage of total revenue represented by certain items reflected in our unaudited condensed consolidated statements of operations:

	Three Months Ended September 30,				Nine Months Ended September 30,			
	2018		2017		2018		2017	
Revenue:								
Royalties	56.2	%	73.4	%	52.3	%	72.7	%
Product revenue	19.7	%	8.7	%	16.7	%	9.6	%
Contract and other revenue	24.1	%	17.9	%	31.0	%	17.7	%
Total revenue	100.0	%	100.0	%	100.0	%	100.0	%
Operating costs and expenses:								
Cost of product revenue*	9.0	%	5.2	%	8.6	%	6.1	%
Cost of contract and other revenue	10.0	%	14.6	%	17.9	%	14.9	%
Research and development*	72.2	%	36.5	%	74.4	%	37.7	%
Sales, general and administrative*	40.9	%	27.0	%	48.7	%	28.2	%
Gain from sale of intellectual property	—	%	(0.5	)%	—	%	(0.2	)%
Restructuring charges	—	%	—	%	1.4	%	—	%
Total operating costs and expenses	132.1	%	82.8	%	151.0	%	86.7	%
Operating income (loss)	(32.1	)%	17.2	%	(51.0	)%	13.3	%
Interest income and other income (expense), net	13.4	%	0.2	%	15.6	%	0.2	%
Interest expense	(6.7	)%	(3.3	)%	(8.0	)%	(3.4	)%
Interest and other income (expense), net	6.7	%	(3.1	)%	7.6	%	(3.2	)%
Income (loss) before income taxes	(25.4	)%	14.1	%	(43.4	)%	10.1	%
Provision for income taxes	150.2	%	6.3	%	52.6	%	5.5	%
Net income (loss)	(175.6	)%	7.8	%	(96.0	)%	4.6	%

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* Includes stock-based compensation:

Cost of product revenue	0.0%	0.0%	0.0%	0.0%
Research and development	5.3%	3.0%	5.9%	3.1%
Sales, general and administrative	5.0%	4.0%	3.6%	3.8%

	Three Months Ended September 30,		Change in		Nine Months Ended September 30,		Change in	
(Dollars in millions)	2018	2017	Percentage		2018	2017	Percentage	
Total Revenue								
Royalties	$33.6	$72.8	(53.8	)%	$85.0	$211.7	(59.8	)%
Product revenue	11.8	8.6	35.7	%	27.1	28.0	(2.9	)%
Contract and other revenue	14.4	17.7	(18.6	)%	50.5	51.5	(2.0	)%
Total revenue	$59.8	$99.1	(39.7	)%	$162.6	$291.2	(44.1	)%

Royalty Revenue

Our royalty revenue, which includes patent and technology license royalties, decreased approximately $39.2 million to $33.6 million for the three months ended September 30, 2018 from $72.8 million for the same period in 2017. Royalty revenue decreased approximately $126.7 million to $85.0 million for the nine months ended September 30, 2018 from $211.7 million for the same period in 2017. The decreases for both periods were due primarily to the change in revenue recognition whereby

38

Table of Contents

we no longer recognize revenue at the time billings become due and collectable. Upon adoption of ASC 606 in the first quarter of 2018, we now recognize revenue at the inception of certain fixed-fee licensing arrangements when our performance obligations are met. Under the previous revenue recognition standard (ASC 605), our revenue for the three and nine months ended September 30, 2018 would have been higher as discussed under Note 2, "Recent Accounting Pronouncements," of Notes to Unaudited Condensed Consolidated Financial Statements of this Form 10-Q.

With changes in revenue recognition due to the adoption of ASC 606 in 2018, we anticipate our royalty revenue for 2018 will be significantly lower than that for 2017 primarily due to the change from the adoption of ASC 606 as noted above. This accounting change will not impact billings or the cash flow from these arrangements. Furthermore, we may experience greater variability in quarterly and annual revenue in future periods as a result of the revenue accounting treatment applied to future fixed-fee licensing arrangements.

Additionally, we are continuously in negotiations for licenses with prospective customers. We expect patent royalties will continue to vary from period to period based on our success in adding new customers, renewing or extending existing agreements, as well as the level of variation in our customers' reported shipment volumes, sales price and mix, offset in part by the proportion of customer payments that are fixed or hybrid in nature. We also expect that our technology royalties will continue to vary from period to period based on our customers’ shipment volumes, sales prices, and product mix.

Royalty Revenue by Reportable Segments

Royalty revenue from the MID reportable segment, which includes patent and technology license royalties, decreased approximately $29.4 million to $27.2 million for the three months ended September 30, 2018 from $56.6 million for the same period in 2017. Royalty revenue from the MID reportable segment decreased approximately $103.1 million to $65.0 million for the nine months ended September 30, 2018 from $168.1 million for the same period in 2017. The decreases for both periods were due to the adoption of ASC 606 in 2018 as discussed above.

Royalty revenue from the RSD reportable segment, which includes patent and technology license royalties, decreased approximately $9.2 million to $6.3 million for the three months ended September 30, 2018 from $15.5 million for the same period in 2017. Royalty revenue from the RSD reportable segment decreased approximately $22.8 million to $19.5 million for the nine months ended September 30, 2018 from $42.3 million for the same period in 2017. The decreases for both periods were due to the adoption of ASC 606 in 2018 as discussed above.

Royalty revenue from the Other segment was immaterial for both the three and nine months ended September 30, 2018 and 2017.

Product Revenue

Product revenue consists of revenue from the sale of memory, security and lighting products. Product revenue increased approximately $3.2 million to $11.8 million for the three months ended September 30, 2018 from $8.6 million for the same period in 2017. The increase was primarily due to higher sales of memory products, offset by lower sales of security products and lighting products, as a result of the plan to close our lighting division in the first quarter of 2018. Product revenue decreased approximately $0.9 million to $27.1 million for the nine months ended September 30, 2018 from $28.0 million for the same period in 2017. The decrease was primarily due to lower sales of security products and lighting products, as a result of the plan to close our lighting division in the first quarter of 2018, partially offset by higher sales of memory products.

We believe that product revenue will increase in 2018, mainly from the sale of our memory products. Our ability to continue to grow product revenue is dependent on, among other things, our ability to continue to obtain orders from customers and our ability to meet our customers' demands.

Product Revenue by Reportable Segments

Product revenue from the MID reportable segment increased approximately $6.2 million to $11.3 million for the three months ended September 30, 2018 from $5.1 million for the same period in 2017. Product revenue from the MID reportable segment increased approximately $10.1 million to $25.2 million for the nine months ended September 30, 2018 from $15.1 million for the same period in 2017. The increases for both periods were due to higher volume of

memory product sales.

Product revenue from the RSD reportable segment was immaterial for both the three months ended September 30, 2018 and 2017, and decreased period over period. Product revenue from the RSD reportable segment decreased $4.0 million to $1.0 million for the nine months ended September 30, 2018 from $5.0 million for the same period in 2017. The decreases for both periods were due to lower sales of security products.

Table of Contents

Product revenue from the Other segment was zero for the three months ended September 30, 2018 as compared to $2.7 million for the same period in 2017. Product revenue from the Other segment decreased approximately $6.9 million to $0.9 million for the nine months ended September 30, 2018 from $7.8 million for the same period in 2017. These decreases for both periods were due to lower sales of light guide products as a result of closing our lighting division in the first quarter of 2018.

Contract and Other Revenue

Contract and other revenue consist of revenue from technology development projects. Contract and other revenue decreased approximately $3.3 million to $14.4 million for the three months ended September 30, 2018 from $17.7 million for the same period in 2017. The decrease was primarily due to lower revenue from various memory, security and lighting technology development projects. Contract and other revenue decreased approximately $1.0 million to $50.5 million for the nine months ended September 30, 2018 from $51.5 million for the same period in 2017. The decrease was primarily due to lower revenue from various memory and lighting technology development projects, offset by higher revenue from various security technology development projects.

We believe that contract and other revenue will fluctuate over time based on our ongoing technology development contractual requirements, the amount of work performed, the timing of completing engineering deliverables, and the changes to work required, as well as new technology development contracts booked in the future.

Contract and Other Revenue by Reportable Segments

Contract and other revenue from the MID reportable segment decreased approximately $1.7 million to $5.3 million for the three months ended September 30, 2018 from $7.0 million for the same period in 2017. Contract and other revenue decreased approximately $0.9 million to $22.6 million for the nine months ended September 30, 2018 from $23.5 million for the same period in 2017. The decreases for both periods were due to lower revenue from various memory technology projects.

Contract and other revenue from the RSD reportable segment decreased approximately $0.9 million to $9.0 million for the three months ended September 30, 2018 from $9.9 million for the same period in 2017, due to lower revenue from various security technology development projects. Contract and other revenue from the RSD reportable segment increased approximately $1.2 million to $26.7 million for the nine months ended September 30, 2018 from $25.5 million for the same period in 2017, due to higher revenue from various security technology development projects.

Contract and other revenue from the Other segment was immaterial for both the three months ended September 30, 2018 and 2017, and decreased period over period. Contract and other revenue from the Other reportable segment decreased approximately $1.3 million to $1.1 million for the nine months ended September 30, 2018 from $2.4 million for the same period in 2017. The decreases for both periods were due to lower revenue from our lighting technology development projects as a result of closing our lighting division in the first quarter of 2018.

Cost of product revenue:

	Three Months Ended September 30,		Change in	Nine Months Ended September 30,		Change in
(Dollars in millions)	2018	2017	Percentage	2018	2017	Percentage
Cost of product revenue	$ 5.4	$ 5.2	4.3 %	$ 13.9	$ 17.9	(22.1)%

Cost of product revenue increased approximately $0.2 million to $5.4 million for the three months ended September 30, 2018 from $5.2 million for the same period in 2017 primarily due to increased cost of sales associated with higher sales of memory products, offset by decreased cost of sales associated with the closure of the lighting division announced in the first quarter of 2018.

Cost of product revenue decreased approximately $4.0 million to $13.9 million for the nine months ended September 30, 2018 from $17.9 million for the same period in 2017 primarily due to decreased cost of sales associated with the closure of the lighting division announced in the first quarter of 2018, offset by increased cost of sales associated with higher sales of memory products.

In the near term, we expect costs of product revenue to be higher as we expect higher sales of our various products in 2018 as compared to 2017.

Table of Contents

Engineering costs:

	Three Months Ended September 30,		Change in	Nine Months Ended September 30,		Change in
(Dollars in millions)	2018	2017	Percentage	2018	2017	Percentage
Engineering costs						
Cost of contract and other revenue	$ 2.1	$ 5.7	(64.7)%	$ 9.4	$ 17.0	(44.8)%
Amortization of intangible assets	3.9	8.8	(54.9)%	19.8	26.3	(24.6)%
Stock-based compensation	0.0	0.0	— %	0.0	0.0	— %
Total cost of contract and other revenue	6.0	14.5	(58.8)%	29.2	43.3	(32.6)%
Research and development	39.9	33.2	20.2 %	111.2	100.7	10.5 %
Stock-based compensation	3.2	3.0	7.2 %	9.7	9.0	6.8 %
Total research and development	43.1	36.2	19.2 %	120.9	109.7	10.2 %
Total engineering costs	$ 49.1	$ 50.7	(3.1)%	$ 150.1	$ 153.0	(1.9)%

Total engineering costs decreased $1.6 million for the three months ended September 30, 2018 as compared to the same period in 2017 primarily due to decreased amortization costs of $4.8 million, offset by increased consulting costs of $1.2 million, headcount related expenses of $0.5 million, engineering development tool costs of $0.5 million, equipment maintenance costs of $0.3 million and stock-based compensation expense of $0.2 million.

Total engineering costs decreased $2.9 million for the nine months ended September 30, 2018 as compared to the same period in 2017 primarily due to decreased amortization costs of $6.5 million and depreciation expense of $1.3 million, offset by increased headcount related expenses of $1.4 million, allocated information technology costs of $0.9 million, consulting expenses of $0.7 million, engineering development tool costs of $0.7 million, stock-based compensation expense of $0.6 million and bonus accrual expense of $0.5 million.

In the near term, we expect engineering costs to be higher as we continue to make investments in the infrastructure and technologies required to maintain our product innovation in semiconductor, security and other technologies.

Sales, general and administrative costs:

	Three Months Ended September 30,		Change in	Nine Months Ended September 30,		Change in
(Dollars in millions)	2018	2017	Percentage	2018	2017	Percentage
Sales, general and administrative costs						
Sales, general and administrative costs	$ 21.5	$ 22.8	(6.0)%	$ 73.2	$ 71.0	3.0 %
Stock-based compensation	3.0	4.0	(24.5)%	5.9	11.1	(46.5)%
Total sales, general and administrative costs	$ 24.5	$ 26.8	(8.7)%	$ 79.1	$ 82.1	(3.6)%

Total sales, general and administrative costs decreased $2.3 million for the three months ended September 30, 2018 as compared to the same period in 2017 primarily due to decreased stock-based compensation expense of $1.0 million primarily due to the termination of our former chief executive officer at the end of June 2018, consulting costs of $0.6 million, bonus accrual expense of $0.5 million, headcount related expenses of $0.4 million and sales and marketing costs of $0.3 million, offset by increased recruiting costs of $0.4 million and facilities costs of $0.2 million.

Total sales, general and administrative costs decreased $3.0 million for the nine months ended September 30, 2018 as compared to the same period in 2017 primarily due to decreased stock-based compensation expense of $5.1 million primarily due to the termination of our former chief executive officer at the end of June 2018, consulting costs of $0.7 million, sales and marketing costs of $0.7 million and bonus accrual expense of $0.4 million, offset by increased headcount related expenses of $1.6 million, recruiting costs of $0.8 million, facilities costs of $0.7 million and accounting costs of $0.5 million.

In the future, sales, general and administrative costs will vary from period to period based on the trade shows, advertising, legal, acquisition and other sales, marketing and administrative activities undertaken, and the change in sales, marketing and administrative headcount in any given period. In the near term, we expect our sales, general and administrative costs to remain relatively flat.

Table of Contents

Restructuring charges:

	Three Months Ended September 30,		Change in	Nine Months Ended September 30,		Change in
(Dollars in millions)	2018	2017	Percentage	2018	2017	Percentage
Restructuring charges	$ —	$ —	— %	$ 2.2	$ —	100.0 %

During the first quarter of 2018, we announced our plans to close our lighting division and manufacturing operations in Brecksville, Ohio. We believed that such business was not core to our strategy and growth objectives. During the third quarter of 2018, we did not record any restructuring charges.

Refer to Note 15, "Restructuring Charges," of Notes to Unaudited Condensed Consolidated Financial Statements of this Form 10-Q for further discussion.

Interest and other income (expense), net:

	Three Months Ended September 30,		Change in	Nine Months Ended September 30,		Change in
(Dollars in millions)	2018	2017	Percentage	2018	2017	Percentage
Interest income and other income (expense), net	$ 8.0	$ 0.2	NM*	$ 25.3	$ 0.5	NM*
Interest expense	(4.0)	(3.3)	21.0 %	(13.0)	(9.8)	33.6 %
Interest and other income (expense), net	$ 4.0	$ (3.1)	NM*	$ 12.3	$ (9.3)	NM*

*NM — percentage is not meaningful

Interest income and other income (expense), net, consists primarily of interest income related to the interest income of $6.5 million and $21.1 million for the three and nine months ended September 30, 2018, respectively, due to the significant financing component of licensing agreements as a result of the adoption of the New Revenue Standard as of January 1, 2018 as well as interest income generated from investments in high quality fixed income securities and any gains or losses from the re-measurement of our monetary assets or liabilities denominated in foreign currencies. Interest expense primarily consists of interest expense associated with our imputed facility lease obligations on the Sunnyvale and Ohio facilities and non-cash interest expense related to the amortization of the debt discount and issuance costs on the 1.375% convertible senior notes due 2023 (the "2023 Notes") and the 1.125% convertible senior notes due 2018 (the "2018 Notes"), as well as the coupon interest related to these notes. We expect our non-cash interest expense to increase steadily as the notes reach maturity.

Provision for income taxes:

	Three Months Ended September 30,		Change in	Nine Months Ended September 30,		Change in
(Dollars in millions)	2018	2017	Percentage	2018	2017	Percentage
Provision for income taxes	$ 89.8	$ 6.2	NM*	$ 85.5	$ 16.1	NM*
Effective tax rate	(593.0)%	44.8 %		(121.4)%	54.8 %	

*NM — percentage is not meaningful

The provision for income taxes reported for the three and nine months ended September 30, 2018 is driven by a combination of the valuation allowance recorded on U.S. deferred tax assets and the projected annual effective tax rate for the foreign jurisdictions for 2018. Our effective tax rate for the three and nine months ended September 30, 2018 was different from the U.S. statutory tax rate primarily due to the valuation allowance recorded on U.S. deferred tax assets. The effective tax rate for the three and nine months ended September 30, 2017 was different from the U.S. statutory tax rate primarily due to income tax expense recognized from exercises and expiration of out-of-the-money fully vested shares from our equity incentive plans.

Table of Contents

We recorded a provision for income taxes of $89.8 million and $6.2 million for the three months ended September 30, 2018 and 2017, respectively. We recorded a provision for income taxes of $85.5 million and $16.1 million for the nine months ended September 30, 2018 and 2017, respectively. During the three months ended September 30, 2018 and 2017, we paid withholding taxes of $5.1 million and $4.7 million, respectively. During the nine months ended September 30, 2018 and 2017, we paid withholding taxes of $16.2 million and $15.6 million, respectively.

We periodically evaluate the realizability of our net deferred tax assets based on all available evidence, both positive and negative. During the third quarter of 2018, we assessed the changes in our underlying facts and circumstances and evaluated the realizability of our existing deferred tax assets based on all available evidence, both positive and negative, and the weight accorded to each, and concluded a full valuation allowance associated with U.S. federal and state deferred tax assets was appropriate. The basis for this conclusion was derived primarily from the fact that we completed our forecasting process during the third quarter of 2018. At a domestic level, losses are expected in future periods in part due to the impact of the adoption of ASC 606. In addition, the decrease in the U.S. federal tax rate from 35% to 21% as a result of U.S. tax reform has further reduced our ability to utilize our deferred tax assets. In light of the above factors, we concluded that it is not more likely than not that we can realize our U.S. deferred tax assets. As such, during the third quarter of 2018, we recorded an additional valuation allowance of $87.2 million through the consolidated financial statements, which represents a full valuation allowance against our U.S. federal and state deferred tax assets.

We have U.S. federal deferred tax assets related to research and development credits, foreign tax credits and other tax attributes that can be used to offset U.S. federal taxable income in future periods. These credit carryforwards will expire if they are not used within certain time periods. It is possible that some or all of these attributes could ultimately expire unused.

As of September 30, 2018, we have a total valuation allowance of $165.1 million on U.S. federal, state and foreign deferred tax assets, resulting in net deferred tax liability of $12.8 million.

Liquidity and Capital Resources

	As of September 30, 2018	December 31, 2017
	(In millions)	
Cash and cash equivalents	$134.5	$ 225.9
Marketable securities	113.7	103.5
Total cash, cash equivalents, and marketable securities	$248.2	$ 329.4

	Nine Months Ended September 30, 2018	2017
	(In millions)	
Net cash provided by operating activities	$52.1	$57.8
Net cash provided by (used in) investing activities	$(13.9)	$31.0
Net cash used in financing activities	$(128.7)	$(43.4)

Liquidity

We currently anticipate that existing cash, cash equivalents and marketable securities balances and cash flows from operations will be adequate to meet our cash needs for at least the next 12 months. Additionally, the majority of our cash and cash equivalents is in the United States. Our cash needs for the nine months ended September 30, 2018 were funded primarily from cash collected from our customers.

We do not anticipate any liquidity constraints as a result of either the current credit environment or investment fair value fluctuations. Additionally, we have the intent and ability to hold our debt investments that have unrealized losses in accumulated other comprehensive gain (loss) for a sufficient period of time to allow for recovery of the

principal amounts invested. Additionally, we have no significant exposure to European sovereign debt. We continually monitor the credit risk in our portfolio and mitigate our credit risk exposures in accordance with our policies.

Table of Contents

As a part of our overall business strategy, from time to time, we evaluate businesses and technologies for potential acquisition that are aligned with our core business and designed to supplement our growth, including the acquisitions of SCS, assets of the Snowbush IP group and the Memory Interconnect Business.

To provide us with more flexibility in returning capital back to our shareholders, on January 21, 2015, our Board authorized a share repurchase program authorizing the repurchase of up to an aggregate of 20.0 million shares. During the first quarter of 2018, we entered into an accelerated share repurchase program with Citibank N.A. to repurchase an aggregate of $50.0 million of our common stock and received an initial delivery of 3.1 million shares, which were retired and recorded as a $40.0 million reduction to stockholders' equity. The remaining $10.0 million of the initial payment was recorded as a reduction to stockholders’ equity as an unsettled forward contract indexed to our stock. During the second quarter of 2018, the accelerated share repurchase program was completed and we received an additional 0.7 million shares of our common stock as the final settlement of the accelerated share repurchase program. We may continue to tactically execute the share repurchase program from time to time.

As of September 30, 2018, there remained an outstanding authorization to repurchase approximately 3.6 million shares of our outstanding common stock under the current share repurchase program. See “Share Repurchase Program” below.

Operating Activities

Cash provided by operating activities of $52.1 million for the nine months ended September 30, 2018 was primarily attributable to the cash generated from customer licensing, software license and related implementation, support and maintenance fees, product sales and engineering services fees. Changes in operating assets and liabilities for the nine months ended September 30, 2018 primarily included increases in unbilled receivables, accounts receivable and prepaids and other current assets, offset by decreases in deferred revenue and accrued salaries and benefits and other liabilities.

Cash provided by operating activities of $57.8 million for the nine months ended September 30, 2017 was primarily attributable to the cash generated from customer licensing, software license and related implementation, support and maintenance fees, product sales and engineering services fees. Changes in operating assets and liabilities for the nine months ended September 30, 2017 primarily included increases in accounts receivable and deferred revenue, offset by decreases in prepaids and other current assets, accounts payable, and accrued salaries and benefits and other liabilities mainly due to the payout of the Corporate Incentive Plan.

Investing Activities

Cash used in investing activities of $13.9 million for the nine months ended September 30, 2018 primarily consisted of purchases of available-for-sale marketable securities of $192.8 million and $7.8 million paid to acquire property, plant and equipment, offset by proceeds from the maturities of available-for-sale marketable securities of $181.7 million, proceeds from the sale of assets held for sale of $3.8 million and proceeds from the sale of an equity security of $1.3 million.

Cash provided by investing activities of $31.0 million for the nine months ended September 30, 2017 primarily consisted of proceeds from the maturities and sales of available-for-sale marketable securities of $32.0 million and $4.5 million, respectively, offset by $5.4 million paid to acquire property, plant and equipment.

Financing Activities

Cash used in financing activities of $128.7 million for the nine months ended September 30, 2018 was primarily due to the repayment of the remaining aggregate principal of the 2018 Notes amounting to $81.2 million, which became due in August 2018, an aggregate payment of $50.0 million to Citibank N.A., as part of our accelerated share repurchase program, and $6.0 million in payments of taxes on restricted stock units, offset by $9.3 million proceeds from the issuance of common stock under equity incentive plans.

Cash used in financing activities of $43.4 million for the nine months ended September 30, 2017 was primarily due to an aggregate payment of $50.0 million to Barclays Bank PLC, as part of our accelerated share repurchase program,

and $3.5 million in payments of taxes on restricted stock units, offset by $10.8 million proceeds from the issuance of common stock under equity incentive plans.

Table of Contents

Contractual Obligations

As of September 30, 2018, our material contractual obligations were (in thousands):

	Total	Remainder of 2018	2019	2020	2021	2022	Thereafter
Contractual obligations (1)							
Imputed financing obligation (2)	$11,102	$ 1,631	$6,602	$2,869	$—	$—	$—
Leases and other contractual obligations	23,844	4,932	5,518	4,558	4,683	3,291	862
Software licenses (3)	6,324	2,792	3,532	—	—	—	—
Convertible notes	172,500	—	—	—	—	—	172,500
Interest payments related to convertible notes	10,680	—	2,372	2,372	2,372	2,372	1,192
Total	$224,450	$ 9,355	$18,024	$9,799	$7,055	$5,663	$174,554

(1) The above table does not reflect possible payments in connection with uncertain tax benefits of approximately $23.7 million including $21.6 million recorded as a reduction of long-term deferred tax assets and $2.1 million in long-term income taxes payable as of September 30, 2018. As noted in Note 13, "Income Taxes," of Notes to Unaudited Condensed Consolidated Financial Statements of this Form 10-Q, although it is possible that some of the unrecognized tax benefits could be settled within the next 12 months, we cannot reasonably estimate the outcome at this time.

(2) With respect to the imputed financing obligation, the main components of the difference between the amount reflected in the contractual obligations table and the amount reflected on the unaudited condensed consolidated balance sheets are the interest on the imputed financing obligation and the estimated common area expenses over the future periods. The amount includes the amended Ohio lease and the amended Sunnyvale lease.

(3) We have commitments with various software vendors for agreements generally having terms longer than one year.

Share Repurchase Program

During the nine months ended September 30, 2018, we repurchased shares of our common stock under our share repurchase program as discussed below.

On January 21, 2015, our Board approved a share repurchase program authorizing the repurchase of up to an aggregate of 20.0 million shares. Share repurchases under the plan may be made through the open market, established plans or privately negotiated transactions in accordance with all applicable securities laws, rules, and regulations. There is no expiration date applicable to the plan.

On March 5, 2018, we initiated an accelerated share repurchase program with Citibank N.A. The accelerated share repurchase program is part of the broader share repurchase program previously authorized by our Board on January 21, 2015. Under the accelerated share repurchase program, we pre-paid to Citibank N.A., the $50.0 million purchase price for our common stock and, in turn, we received an initial delivery of approximately 3.1 million shares of our common stock from Citibank N.A., in the first quarter of 2018, which were retired and recorded as a $40.0 million reduction to stockholders' equity. The remaining $10.0 million of the initial payment was recorded as a reduction to stockholders' equity as an unsettled forward contract indexed to our stock. During the second quarter of 2018, the accelerated share repurchase program was completed and we received an additional 0.7 million shares of our common stock as the final settlement of the accelerated share repurchase program.

As of September 30, 2018, there remained an outstanding authorization to repurchase approximately 3.6 million shares of our outstanding common stock under the current share repurchase program.

We record stock repurchases as a reduction to stockholders' equity. We record a portion of the purchase price of the repurchased shares as an increase to accumulated deficit when the price of the shares repurchased exceeds the average original proceeds per share received from the issuance of common stock.

Table of Contents

Critical Accounting Policies and Estimates

The discussion and analysis of our financial condition and results of operations are based upon our condensed consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenue and expenses, and related disclosure of contingent assets and liabilities. On an ongoing basis, we evaluate our estimates, including those related to revenue recognition, investments, income taxes, litigation and other contingencies. We base our estimates on historical experience and on various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

Our critical accounting estimates include those regarding (1) revenue recognition, (2) goodwill, (3) intangible assets, (4) income taxes and (5) stock-based compensation. For a discussion of our critical accounting estimates, see "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations — Critical Accounting Policies and Estimates" in our Annual Report on Form 10-K for the year ended December 31, 2017.

Recent Accounting Pronouncements

See Note 2, "Recent Accounting Pronouncements," of Notes to Unaudited Condensed Consolidated Financial Statements of this Form 10-Q for discussion of recent accounting pronouncements including the respective expected dates of adoption.

Item 3. Quantitative and Qualitative Disclosures about Market Risk

We are exposed to financial market risks, primarily arising from the effect of interest rate fluctuations on our investment portfolio. Interest rate fluctuation may arise from changes in the market's view of the quality of the security issuer, the overall economic outlook, and the time to maturity of our portfolio. We mitigate this risk by investing only in high quality, highly liquid instruments. Securities with original maturities of one year or less must be rated by two of the three industry standard rating agencies as follows: A1 by Standard & Poor's, P1 by Moody's and/or F-1 by Fitch. Securities with original maturities of greater than one year must be rated by two of the following industry standard rating agencies as follows: AA- by Standard & Poor's, Aa3 by Moody's and/or AA- by Fitch. By corporate investment policy, we limit the amount of exposure to $15.0 million or 10% of the portfolio, whichever is lower, for any single non-U.S. Government issuer. A single U.S. Agency can represent up to 25% of the portfolio. No more than 20% of the total portfolio may be invested in the securities of an industry sector, with money market fund investments evaluated separately. Our policy requires that at least 10% of the portfolio be in securities with a maturity of 90 days or less. We may make investments in U.S. Treasuries, U.S. Agencies, corporate bonds and municipal bonds and notes with maturities up to 36 months. However, the bias of our investment portfolio is shorter maturities. All investments must be U.S. dollar denominated. Additionally, we have no significant exposure to European sovereign debt.

We invest our cash equivalents and marketable securities in a variety of U.S. dollar financial instruments such as U.S. Treasuries, U.S. Government Agencies, commercial paper and corporate notes. Our policy specifically prohibits trading securities for the sole purposes of realizing trading profits. However, we may liquidate a portion of our portfolio if we experience unforeseen liquidity requirements. In such a case, if the environment has been one of rising interest rates we may experience a realized loss, similarly, if the environment has been one of declining interest rates we may experience a realized gain. As of September 30, 2018, we had an investment portfolio of fixed income marketable securities of $199.8 million including cash equivalents. If market interest rates were to increase immediately and uniformly by 1.0% from the levels as of September 30, 2018, the fair value of the portfolio would decline by approximately $0.4 million. Actual results may differ materially from this sensitivity analysis.

The fair value of our convertible notes is subject to interest rate risk, market risk and other factors due to the convertible feature. The fair value of the convertible notes will generally increase as interest rates fall and decrease as interest rates rise. In addition, the fair value of the convertible notes will generally increase as our common stock price increases and will generally decrease as our common stock price declines in value. The interest and market value changes affect the fair value of our convertible notes but do not impact our financial position, cash flows or results of operations due to the fixed nature of the debt obligation.

We invoice the majority of our customers in U.S. dollars. Although the fluctuation of currency exchange rates may impact our customers, and thus indirectly impact us, we do not attempt to hedge this indirect and speculative risk. Our overseas operations consist primarily of international business operations in the Netherlands and the United Kingdom, design centers in Canada, India and Finland and small business development offices in Australia, China, Japan, Korea, Singapore and Taiwan. We monitor our foreign currency exposure; however, as of September 30, 2018, we believe our foreign currency exposure is not material enough to warrant foreign currency hedging.

46

Table of Contents

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures designed to ensure that information required to be disclosed in the reports we file or submit pursuant to the Securities and Exchange Act of 1934, as amended (the “Exchange Act”), is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the Securities and Exchange Commission, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure.

Management, with the participation of the Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of the design and operation of our disclosure controls and procedures as defined in Rules 13a-15(e) and 15d-15(e) of the Exchange Act as of the end of the period covered by this report. Based on this evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that, as of September 30, 2018, our disclosure controls and procedures were effective.

Changes in Internal Control Over Financial Reporting

Beginning January 1, 2018, we implemented ASC 606, Revenue from Contracts with Customers. The new revenue standard had a material impact on our ongoing net income. We implemented changes to our processes related to revenue recognition and the control activities within them. These included the development of new policies based on the five-step model provided in the new revenue standard, new training, ongoing contract review requirements, and gathering of information provided for disclosures. There were no other changes in our internal control over financial reporting that occurred during the third quarter of 2018 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Table of Contents

PART II—OTHER INFORMATION

Item 1. Legal Proceedings
We are not currently a party to any material pending legal proceeding; however, from time to time, we may become involved in legal proceedings or be subject to claims arising in the ordinary course of our business. Although the results of litigation and claims cannot be predicted with certainty, we currently believe that the final outcome of these ordinary course matters will not have a material adverse effect on our business, operating results, financial position or cash flows. Regardless of the outcome, litigation can have an adverse impact on us because of defense and settlement costs, diversion of management attention and resources and other factors.
Item 1A. Risk Factors
Because of the following factors, as well as other variables affecting our operating results, past financial performance may not be a reliable indicator of future performance, and historical trends should not be used to anticipate results or trends in future periods. See also “Note Regarding Forward-Looking Statements” at the beginning of this report.

Risks Associated with Our Business, Industry and Market Conditions
The success of our business depends on sustaining or growing our licensing revenue and the failure to achieve such revenue would lead to a material decline in our results of operations.
Our revenue consists mainly of patent and technology license fees paid for access to our patents, developed technology and development and support services provided to our customers. Our ability to secure and renew the licenses from which our revenues are derived depends on our customers adopting our technology and using it in the products they sell. Once secured, license revenue may be negatively affected by factors within and outside our control, including reductions in our customers’ sales prices, sales volumes, our failure to timely complete engineering deliverables, and the terms of such licenses. In addition, our licensing cycle for new licensees as well as renewals for existing licensees is lengthy, costly and unpredictable. We cannot provide any assurance that we will be successful in signing new license agreements or renewing existing license agreements on equal or favorable terms or at all. If we do not achieve our revenue goals, our results of operations could decline.
We have traditionally operated in, and may enter other, industries that are highly cyclical and competitive.
Our target customers are companies that develop and market high volume business and consumer products in semiconductors, computing, data centers, networks, tablets, handheld devices, mobile applications, gaming and graphics, high-definition televisions, general lighting, cryptography and data security. The electronics industry is intensely competitive and has been impacted by rapid technological change, short product life cycles, cyclical market patterns, price erosion and increasing foreign and domestic competition. We are subject to many risks beyond our control that influence whether or not we are successful in winning target customers or retaining existing customers, including, primarily, competition in a particular industry, market acceptance of such customers' products and the financial resources of such customers. In particular, DRAM manufacturers, which make up a significant part of our revenue, are prone to significant business cycles and have suffered material losses and other adverse effects to their businesses, leading to industry consolidation from time-to-time that may result in loss of revenues under our existing license agreements or loss of target customers. As a result of ongoing competition in the industries in which we operate and volatility in various economies around the world, we may achieve a reduced number of licenses or may experience tightening of customers' operating budgets, difficulty or inability of our customers to pay our licensing fees, lengthening of the approval process for new licenses and consolidation among our customers. All of these factors may adversely affect the demand for our technology and may cause us to experience substantial fluctuations in our operating results.
We face competition from semiconductor and digital electronics products and systems companies, and other semiconductor intellectual property companies that provide security cores that are available to the market. We believe the principal competition for our technologies may come from our prospective customers, some of which are evaluating and developing products based on technologies that they contend or may contend will not require a license from us. Some of our competitors use a system-level design approach similar to ours, including activities such as board and package design, power and signal integrity analysis, and thermal management. Many of these companies

are larger and may have better access to financial, technical and other resources than we possess.
To the extent that alternatives might provide comparable system performance at lower or similar cost to our technologies, or are perceived to require the payment of no or lower royalties, or to the extent other factors influence the industry, our customers and prospective customers may adopt and promote alternative technologies. Even to the extent we determine that such

Table of Contents

alternative technologies infringe our patents, there can be no assurance that we would be able to negotiate agreements that would result in royalties being paid to us without litigation, which could be costly and the results of which would be uncertain.

In addition, our expansion into new markets subjects us to additional risks. We may have limited or no experience in new products and markets, including our CryptoManager platform and new offerings that have resulted from our acquisition of SCS in the mobile payment and smart ticketing solution spaces, and our acquisitions of the assets of the Snowbush IP group and the Memory Interconnect Business, and our customers may not adopt our new offerings. These and other new offerings may present new and difficult challenges, which could negatively affect our operating results.

We may have to invest more resources in research and development than anticipated, which could increase our operating expenses and negatively impact our operating results.

If new competitors, technological advances by existing competitors, and/or development of new technologies or other competitive factors require us to invest significantly greater resources than anticipated in our research and development efforts, our operating expenses could increase. If we are required to invest significantly greater resources than anticipated in research and development efforts without an increase in revenue, our operating results would decline. We expect these expenses to increase in the foreseeable future as our technology development efforts continue.

Our revenue is concentrated in a few customers, and if we lose any of these customers through contract terminations or acquisitions, our revenue may decrease substantially.

We have a high degree of revenue concentration. Our top five customers for each reporting period represented approximately 50% and 56% of our revenue for the nine months ended September 30, 2018 and 2017, respectively. Additionally, our top five customers represented approximately 55% and 63% of our revenues for the years ended December 31, 2017 and 2016, respectively. We expect to continue to experience significant revenue concentration for the foreseeable future.

In addition, our license agreements are complex and some contain terms that require us to provide certain customers with the lowest royalty rate that we provide to other customers for similar technologies, volumes and schedules. These clauses may limit our ability to effectively price differently among our customers, to respond quickly to market forces, or otherwise to compete on the basis of price. These clauses may also require us to reduce royalties payable by existing customers when we enter into or amend agreements with other customers. Any adjustment that reduces royalties from current customers or licensees may have a material adverse effect on our operating results and financial condition.

We continue to negotiate with customers and prospective customers to enter into license agreements. Any future agreement may trigger our obligation to offer comparable terms or modifications to agreements with our existing customers, which may be less favorable to us than the existing license terms. We expect licensing fees will continue to vary based on our success in renewing existing license agreements and adding new customers, as well as the level of variation in our customers' reported shipment volumes, sales price and mix, offset in part by the proportion of customer payments that are fixed. In particular, under our license agreement with Samsung, the license fees payable by Samsung are subject to certain adjustments and conditions, and we therefore cannot provide assurances that the revenues generated by this license will not decline in the future. In addition, some of our material license agreements may contain rights by the customer to terminate for convenience, or upon certain other events, such as change of control, material breach, insolvency or bankruptcy proceedings. If we are unsuccessful in entering into license agreements with new customers or renewing license agreements with existing customers, on favorable terms or at all, or if they are terminated, our results of operations may decline significantly.

Our business and operations could suffer in the event of security breaches.

Attempts by others to gain unauthorized access to our information technology systems are becoming more sophisticated. These attempts, which might be related to industrial or other espionage, include covertly introducing malware to our computers and networks and impersonating authorized users, among others. We seek to detect and

investigate all security incidents and to prevent their recurrence, but in some cases, we might be unaware of an incident or its magnitude and effects. While we have not identified any material incidents of unauthorized access to date, the theft, unauthorized use or publication of our intellectual property and/or confidential business information could harm our competitive position and reputation, reduce the value of our investment in research and development and other strategic initiatives or otherwise adversely affect our business. To the extent that any future security breach results in inappropriate disclosure of our customers' confidential information, we may incur liability.

Table of Contents

Failures in our products and services or in the products of our customers, including those resulting from security vulnerabilities, defects, bugs or errors, could harm our business.

Our products and services are highly technical and complex, and among our various businesses our products and services are crucial to providing security, payment and other critical functions for our customers' operations. Our products and services have from time to time contained and may in the future contain undetected errors, bugs defects or other security vulnerabilities. Some errors in our products and services may only be discovered after a product or service has been deployed and used by customers, and may in some cases only be detected under certain circumstances or after extended use. In addition, because the techniques used by hackers to access or sabotage our products and services and other technologies change and evolve frequently and generally are not recognized until launched against a target, we may be unable to anticipate, detect or prevent these techniques and may not address them in our data security technologies. Any errors, bugs, defects or security vulnerabilities discovered in our solutions after commercial release could adversely affect our revenue, our customer relationships and the market's perception of our products and services. We may not be able to correct any errors, bugs, defects, security flaws or vulnerabilities promptly, or at all. Any breaches, defects, errors or vulnerabilities in our products and services could result in:

- expenditure of significant financial and research and development resources in efforts to analyze, correct, eliminate or work around breaches, errors, bugs or defects or to address and eliminate vulnerabilities;
- financial liability to customers for breach of certain contract provisions, including indemnification obligations;
- loss of existing or potential customers;
- delayed or lost revenue;
- delay or failure to attain market acceptance;
- negative publicity, which would harm our reputation; and
- litigation, regulatory inquiries or investigations that would be costly and harm our reputation.

Some of our revenue is subject to the pricing policies of our customers over which we have no control.

We have no control over our customers' pricing of their products and there can be no assurance that licensed products will be competitively priced or will sell in significant volumes. Any premium charged by our customers in the price of memory and controller chips or other products over alternatives must be reasonable. If the benefits of our technology do not match the price premium charged by our customers, the resulting decline in sales of products incorporating our technology could harm our operating results.

Our licensing cycle is lengthy and costly, and our marketing and licensing efforts may be unsuccessful.

The process of persuading customers to adopt and license our chip interface, lighting, data security, and other technologies can be lengthy. Even if successful, there can be no assurance that our technologies will be used in a product that is ultimately brought to market, achieves commercial acceptance or results in significant royalties to us. We generally incur significant marketing and sales expenses prior to entering into our license agreements, generating a license fee and establishing a royalty stream from each customer. The length of time it takes to establish a new licensing relationship can take many months or even years. We may incur costs in any particular period before any associated revenue stream begins, if at all. If our marketing and sales efforts are very lengthy or unsuccessful, then we may face a material adverse effect on our business and results of operations as a result of failure to obtain or an undue delay in obtaining royalties.

Future revenue is difficult to predict for several reasons, and our failure to predict revenue accurately may result in our stock price declining.

Our lengthy license negotiation cycles could make our future revenue difficult to predict because we may not be successful in entering into licenses with our customers on our anticipated timelines.

In addition, while some of our license agreements provide for fixed, quarterly royalty payments, many of our license agreements provide for volume-based royalties, and may also be subject to caps on royalties in a given period. The sales volume and prices of our customers' products in any given period can be difficult to predict. In addition, we applied the new revenue standard (ASC 606) for the first quarter of 2018, and we anticipate that our revenue will vary a great deal from quarter to quarter. As a result of the foregoing items, our actual results may differ substantially from analyst estimates or our forecasts in any given quarter.

Also, a portion of our revenue comes from development and support services provided to our customers. Depending upon the nature of the services, a portion of the related revenue may be recognized ratably over the support period, or may be recognized according to contract revenue accounting. Contract revenue accounting may result in deferral of the service fees to the completion of the contract, or may result in the recognition of service fees over the period in which services are performed on a percentage-of-completion basis.

Table of Contents

We may not be successful in entering into new markets, and our new product offerings, such as our acquisitions of SCS, the assets of the Snowbush IP group and the Memory Interconnect Business, our CryptoManager platform and new offerings in the mobile credential and smart ticketing solution spaces, may not be adopted by our customers or potential customers. In addition, once we commercially launch our products, the sales volume of and resulting revenue from such products in any given period will be difficult to predict.

We may fail to meet our publicly announced guidance or other expectations about our business, which would likely cause our stock price to decline.

We provide guidance regarding our expected financial and business performance including our anticipated future revenues, operating expenses and other financial and operation metrics. We enhanced our guidance following implementation of the New Revenue Standard in the first quarter of 2018.
Correctly identifying the key factors affecting business conditions and predicting future events is an inherently uncertain process. Any guidance that we provide may not always be accurate, or may vary from actual results, due to our inability to correctly identify and quantify risks and uncertainties to our business and to quantify their impact on our financial performance. We offer no assurance that such guidance will ultimately be accurate, and investors should treat any such guidance with appropriate caution. If we fail to meet our guidance or if we find it necessary to revise such guidance, even if such failure or revision is seemingly insignificant, investors and analysts may lose confidence in us and the market value of our common stock could be materially adversely affected.
Changes in accounting principles and guidance could result in unfavorable accounting charges or effects.
We prepare our financial statements in accordance with accounting principles generally accepted in the United States and these principles are subject to interpretation by the SEC and various bodies. A change in these principles or application guidance, or in their interpretations, may have a material effect on our reported results, as well as our processes and related controls, and may retroactively affect previously reported results. For example, the New Revenue Standard, as amended, is effective for us on January 1, 2018. We adopted the New Revenue Standard on a modified retrospective basis, with a cumulative-effect adjustment to the opening balance of accumulated deficit on January 1, 2018. The New Revenue Standard materially impacted the timing of revenue recognition for our fixed-fee intellectual property (IP) licensing arrangements (including certain fixed-fee agreements that license our existing IP portfolio as well as IP added to our portfolio during the license term) as a majority of such revenue would be recognized at inception of the license term, as opposed to over time as is the case under prior U.S. GAAP, and we are required to compute and recognize interest income over time for certain licensing arrangements as control over the IP generally transfers significantly in advance of cash being received from customers. The impact of the adoption of the New Revenue Standard did not have a material impact on our other revenue streams. We have also enhanced the form and content of some of our guidance metrics that we provide following implementation of the New Revenue Standard. We expect that any change to current revenue recognition practices may significantly increase volatility in our quarterly revenue, financial results and trends, and may impact our stock price.
We have in the past made and may in the future make acquisitions or enter into mergers, strategic investments, sales of assets or other arrangements that may not produce expected operating and financial results.
From time to time, we engage in acquisitions, strategic transactions and strategic investments, such as our 2016 acquisitions of SCS, the assets of the Snowbush IP group and the Memory Interconnect Business. Many of our acquisitions or strategic investments entail a high degree of risk, including those involving new areas of technology and such investments may not become liquid for several years after the date of the investment, if at all. Our acquisitions or strategic investments may not provide the advantages that we anticipated or generate the financial returns we expect, including if we are unable to close any pending acquisitions. For example, for any pending or completed acquisitions, we may discover unidentified issues not discovered in due diligence, and we may be subject to liabilities that are not covered by indemnification protection or become subject to litigation. Achieving the anticipated benefits of business acquisitions depends in part upon our ability to integrate the acquired businesses in an efficient and effective manner. The integration of companies that have previously operated independently may result in significant challenges, including, among others: retaining key employees; successfully integrating new employees,

business systems and technology; retaining customers of the acquired business; minimizing the diversion of management's and other employees' attention from ongoing business matters; coordinating geographically separate organizations; consolidating research and development operations; and consolidating corporate and administrative infrastructures.

Our strategic investments in new areas of technology may involve significant risks and uncertainties, including distraction of management from current operations, greater than expected liabilities and expenses, inadequate return of capital, and unidentified issues not discovered in due diligence. These investments are inherently risky and may not be successful.

Table of Contents

In addition, we may record impairment charges related to our acquisitions or strategic investments. Any losses or impairment charges that we incur related to acquisitions, strategic investments or sales of assets will have a negative impact on our financial results and the market value of our common stock, and we may continue to incur new or additional losses related to acquisitions or strategic investments.

We may have to incur debt or issue equity securities to pay for any future acquisition, which debt could involve restrictive covenants or which equity security issuance could be dilutive to our existing stockholders.

From time to time, we may also divest certain assets. These divestitures or proposed divestitures may involve the loss of revenue and/or potential customers, and the market for the associated assets may dictate that we sell such assets for less than what we paid. In addition, in connection with any asset sales or divestitures, we may be required to provide certain representations, warranties and covenants to buyers. While we would seek to ensure the accuracy of such representations and warranties and fulfillment of any ongoing obligations, we may not be completely successful and consequently may be subject to claims by a purchaser of such assets.

A substantial portion of our revenue is derived from sources outside of the United States and this revenue and our business generally are subject to risks related to international operations that are often beyond our control.

For the nine months ended September 30, 2018 and 2017, revenues received from our international customers constituted approximately 51% and 58%, respectively, of our total revenue. Additionally, for the years ended December 31, 2017 and 2016, revenues received from our international customers constituted approximately 58% and 64%, respectively, of our total revenue. We expect that future revenue derived from international sources will continue to represent a significant portion of our total revenue.

To the extent that customer sales are not denominated in U.S. dollars, any royalties which are based on a percentage of the customers' sales that we receive as a result of such sales could be subject to fluctuations in currency exchange rates. In addition, if the effective price of licensed products sold by our foreign customers were to increase as a result of fluctuations in the exchange rate of the relevant currencies, demand for licensed products could fall, which in turn would reduce our royalties. We do not use financial instruments to hedge foreign exchange rate risk.

We currently have international business operations in the United Kingdom and the Netherlands, international design operations in Canada, India, Finland and France, and business development operations in Australia, China, Japan, Korea, Singapore and Taiwan. Our international operations and revenue are subject to a variety of risks which are beyond our control, including:

- hiring, maintaining and managing a workforce and facilities remotely and under various legal systems, including compliance with local labor and employment laws;
- non-compliance with our code of conduct or other corporate policies;
- natural disasters, acts of war, terrorism, widespread illness or security breaches;
- export controls, tariffs, import and licensing restrictions and other trade barriers;
- profits, if any, earned abroad being subject to local tax laws and not being repatriated to the United States or, if repatriation is possible, limited in amount;
- adverse tax treatment of revenue from international sources and changes to tax codes, including being subject to foreign tax laws and being liable for paying withholding, income or other taxes in foreign jurisdictions;
- unanticipated changes in foreign government laws and regulations;
- increased financial accounting and reporting burdens and complexities;
- lack of protection of our intellectual property and other contract rights by jurisdictions in which we may do business to the same extent as the laws of the United States;
- potential vulnerability to computer system, internet or other systemic attacks, such as denial of service, viruses or other malware which may be caused by criminals, terrorists or other sophisticated organizations;
- social, political and economic instability;
- geopolitical issues, including changes in diplomatic and trade relationships; and
- cultural differences in the conduct of business both with customers and in conducting business in our international facilities and international sales offices.

We and our customers are subject to many of the risks described above with respect to companies which are located in different countries. There can be no assurance that one or more of the risks associated with our international

operations will not result in a material adverse effect on our business, financial condition or results of operations.

Weak global economic conditions may adversely affect demand for the products and services of our customers.

Our operations and performance depend significantly on worldwide economic conditions. Uncertainty about global or

Table of Contents

regional economic and political conditions poses a risk as consumers and businesses may postpone spending in response to tighter credit, negative financial news and declines in income or asset values, which could have a material negative effect on the demand for the products of our customers in the foreseeable future. If our customers experience reduced demand for their products as a result of global or regional economic conditions or otherwise, this could result in reduced royalty revenue and our business and results of operations could be harmed.

If our counterparties are unable to fulfill their financial and other obligations to us, our business and results of operations may be affected adversely.

Any downturn in economic conditions or other business factors could threaten the financial health of our counterparties, including companies with which we have entered into licensing and/or settlement agreements, and their ability to fulfill their financial and other obligations to us. Such financial pressures on our counterparties may eventually lead to bankruptcy proceedings or other attempts to avoid financial obligations that are due to us. Because bankruptcy courts have the power to modify or cancel contracts of the petitioner which remain subject to future performance and alter or discharge payment obligations related to pre-petition debts, we may receive less than all of the payments that we would otherwise be entitled to receive from any such counterparty as a result of bankruptcy proceedings.

If we are unable to attract and retain qualified personnel, our business and operations could suffer.

Our success is dependent upon our ability to identify, attract, compensate, motivate and retain qualified personnel, especially engineers, senior management and other key personnel. The loss of the services of any key employees could be disruptive to our development efforts, business relationships and strategy, and could cause our business and operations to suffer.

Recently, we have experienced significant changes in our management team, including in the role of chief executive officer and other senior executives. Our future success depends in large part upon the continued service and enhancement of our management team and our employees. If there are further changes in management, such changes could be disruptive and could negatively affect our sales, operations, culture, future recruiting efforts and strategic direction. Competition for qualified executives is intense and if we are unable to continue expanding our management team, or successfully integrate new additions to our management team in a manner that enables us to scale our business and operations effectively, our ability to operate effectively and efficiently could be limited or negatively impacted. In addition, changes in key management positions may temporarily affect our financial performance and results of operations as new management becomes familiar with our business, processes and strategy. The loss of any of our key personnel, or our inability to attract, integrate and retain qualified employees, could require us to dedicate significant financial and other resources to such personnel matters, disrupt our operations and seriously harm our operations and business.

We are subject to various government restrictions and regulations, including on the sale of products and services that use encryption technology and those related to privacy and other consumer protection matters.

Various countries have adopted controls, license requirements and restrictions on the export, import and use of products or services that contain encryption technology. In addition, governmental agencies have proposed additional requirements for encryption technology, such as requiring the escrow and governmental recovery of private encryption keys. Restrictions on the sale or distribution of products or services containing encryption technology may impact the ability of RSD to license its data security technologies to the manufacturers and providers of such products and services in certain markets or may require RSD or its customers to make changes to the licensed data security technology that is embedded in such products to comply with such restrictions. Government restrictions, or changes to the products or services of RSD's customers to comply with such restrictions, could delay or prevent the acceptance and use of such customers' products and services. In addition, the United States and other countries have imposed export controls that prohibit the export of encryption technology to certain countries, entities and individuals. Our failure to comply with export and use regulations concerning encryption technology of RSD could subject us to sanctions and penalties, including fines, and suspension or revocation of export or import privileges.

We are subject to a variety of laws and regulations in the United States, the European Union and other countries that involve, for example, user privacy, data protection and security, content and consumer protection. A number of proposals are pending before federal, state, and foreign legislative and regulatory bodies that could significantly affect

our business. For example, in 2016, a new EU data protection regime, the General Data Protection Regulation ("GDPR") was adopted, with it fully effective on May 25, 2018. The GDPR may require us to modify our existing practices with respect to the collection, use, and disclosure of data. The GDPR provides for significant penalties in the case of non-compliance of up to €20 million or four percent of worldwide annual revenues, whichever is greater. The GDPR and other existing and proposed laws and regulations can be costly to comply with and can delay or impede the development of new products, result in negative publicity, increase our operating costs and subject us to claims or other remedies.

In accordance with the Dodd-Frank Wall Street Reform and Consumer Protection Act, the SEC established new disclosure and reporting requirements for those companies that use "conflict" minerals mined from the Democratic Republic of Congo and

Table of Contents

adjoining countries in their products, whether or not these products are manufactured by third parties. These requirements could affect the sourcing and availability of minerals that are used in the manufacture of our products. We have to date incurred costs and expect to incur significant additional costs associated with complying with the disclosure requirements, including for example, due diligence in regard to the sources of any conflict minerals used in our products, in addition to the cost of remediation and other changes to products, processes, or sources of supply as a consequence of such verification activities. Additionally, we may face reputational challenges with our customers and other stakeholders if we are unable to sufficiently verify the origins of all minerals used in our products through the due diligence procedures that we implement. We may also face challenges with government regulators and our customers and suppliers if we are unable to sufficiently verify that the metals used in our products are conflict free.
Our operations are subject to risks of natural disasters, acts of war, terrorism, widespread illness or security breach at our domestic and international locations, any one of which could result in a business stoppage and negatively affect our operating results.
Our business operations depend on our ability to maintain and protect our facilities, computer systems and personnel, which are primarily located in the San Francisco Bay Area in the United States, the United Kingdom, the Netherlands, India and Australia. The San Francisco Bay Area is in close proximity to known earthquake fault zones. Our facilities and transportation for our employees are susceptible to damage from earthquakes and other natural disasters such as fires, floods and similar events. Should a catastrophe disable our facilities, we do not have readily available alternative facilities from which we could conduct our business, so any resultant work stoppage could have a negative effect on our operating results. We also rely on our network infrastructure and technology systems for operational support and business activities which are subject to physical and cyber damage, and also susceptible to other related vulnerabilities common to networks and computer systems. Acts of terrorism, widespread illness, war and any event that causes failures or interruption in our network infrastructure and technology systems could have a negative effect at our international and domestic facilities and could harm our business, financial condition, and operating results.
We do not have extensive experience in manufacturing and marketing products and, as a result, may be unable to sustain and grow a profitable commercial market for new and existing products.
We do not have extensive experience in creating, manufacturing and marketing products, including our CryptoManager platform and new offerings that have resulted from our acquisition of SCS in the mobile credential and smart card solution spaces, and our acquisitions of the assets of the Snowbush IP group and the Memory Interconnect Business. These and other new offerings may present new and difficult challenges, and we may be subject to claims if customers of these offerings experience delays, failures, non-performance or other quality issues. In particular, we may experience difficulties with product design, qualification, manufacturing, marketing or certification that could delay or prevent our development, introduction or marketing of new products. Although we intend to design our products to be fully compliant with applicable industry standards, proprietary enhancements may not in the future result in full conformance with existing industry standards under all circumstances.

If we fail to introduce products that meet the demand of our customers or penetrate new markets in which we expend significant resources, our revenues will decrease over time and our financial condition could suffer. Additionally, if we concentrate resources on a new market that does not prove profitable or sustainable, it could damage our reputation and limit our growth, and our financial condition could decline.

We rely on a number of third-party providers for data center hosting facilities, equipment, maintenance and other services, and the loss of, or problems with, one or more of these providers may impede our growth or cause us to lose customers.

We rely on third-party providers to supply data center hosting facilities, equipment, maintenance and other services in order to provide some of our services, including in our offerings of our advanced mobile payment platform and smart ticketing platform, and have entered into various agreements for such services. The continuous availability of our service depends on the operations of those facilities, on a variety of network service providers and on third-party vendors. In addition, we depend on our third-party facility providers' ability to protect these facilities against damage

or interruption from natural disasters, power or telecommunications failures, criminal acts, cyber-attacks and similar events. If there are any lapses of service or damage to a facility, we could experience lengthy interruptions in our service as well as delays and additional expenses in arranging new facilities and services. Even with current and planned disaster recovery arrangements, our business could be harmed. Any interruptions or delays in our service, whether as a result of third-party error, our own error, natural disasters, criminal acts, security breaches or other causes, whether accidental or willful, could harm our relationships with customers, harm our reputation and cause our revenue to decrease and/or our expenses to increase. Also, in the event of damage or interruption, our insurance policies may not adequately compensate us for any losses that we may incur. These factors in turn could further

Table of Contents

reduce our revenue, subject us to liability and cause us to issue credits or cause us to lose customers, any of which could materially adversely affect our business.

We rely on third parties for a variety of services, including manufacturing, and these third parties' failure to perform these services adequately could materially and adversely affect our business.

We rely on third parties for a variety of services, including our manufacturing supply chain partners and third parties within our sales and distribution channels. Certain of these third parties are, and may be, our sole manufacturer or sole source of production materials. If we fail to manage our relationship with these manufacturers and suppliers effectively, or if they experience delays, disruptions, capacity constraints or quality control problems in their operations, our ability to ship products to our customers could be impaired and our competitive position and reputation could be harmed. In addition, any adverse change in any of our manufacturers and suppliers' financial or business condition could disrupt our ability to supply quality products to our customers. If we are required to change our manufacturers, we may lose revenue, incur increased costs and damage our end-customer relationships. In addition, qualifying a new manufacturer and commencing production can be an expensive and lengthy process. If our third party manufacturers or suppliers are unable to provide us with adequate supplies of high-quality products for any other reason, we could experience a delay in our order fulfillment, and our business, operating results and financial condition would be adversely affected. In the event these and other third parties we rely on fail to provide their services adequately, including as a result of errors in their systems or events beyond their control, or refuse to provide these services on terms acceptable to us or at all, and we are not able to find suitable alternatives, our business may be materially and adversely affected. In addition, our orders may represent a relatively small percentage of the overall orders received by our manufacturers from their customers. As a result, fulfilling our orders may not be considered a priority in the event our manufacturers are constrained in their ability to fulfill all of their customer obligations in a timely manner. If our manufacturers are unable to provide us with adequate supplies of high-quality products, or if we or our manufacturers are unable to obtain adequate quantities of components, it could cause a delay in our order fulfillment, in which case our business, operating results and financial condition could be adversely affected.

Warranty, service level agreement and product liability claims brought against us could cause us to incur significant costs and adversely affect our operating results as well as our reputation and relationships with customers.

We may from time to time be subject to warranty, service level agreement and product liability claims with regard to product performance and our services. We could incur material losses as a result of warranty, support, repair or replacement costs in response to customer complaints or in connection with the resolution of contemplated or actual legal proceedings relating to such claims. In addition to potential losses arising from claims and related legal proceedings, warranty and product liability claims could affect our reputation and our relationship with customers. We generally attempt to limit the maximum amount of indemnification or liability that we could be exposed to under our contracts, however, this is not always possible.

Any failure in our delivery of high-quality technical support services may adversely affect our relationships with our customers and our financial results.

Our customers depend on our support organization to resolve technical issues and provide ongoing maintenance relating to our products and services. We may be unable to respond quickly enough to accommodate short-term increases in customer demand for support services. Increased customer demand for these services, without corresponding revenues, could increase costs and adversely affect our operating results. In addition, our sales process is highly dependent on our offerings and business reputation and on positive recommendations from our existing customers. Any failure to maintain high-quality technical support, or a market perception that we do not maintain high-quality support, could adversely affect our reputation, our ability to sell our solutions to existing and prospective customers, and our business, operating results and financial position.

Certain software that we use in certain of our products is licensed from third parties and, for that reason, may not be available to us in the future, which has the potential to delay product development and production or cause us to incur additional expense, which could materially adversely affect our business, financial condition, operating results and cash flow.

Some of our products and services contain software licensed from third parties. Some of these licenses may not be available to us in the future on terms that are acceptable to us or allow our products to remain competitive. The loss of these licenses or the inability to maintain any of them on commercially acceptable terms could delay development of future offerings or the enhancement of existing products and services. We may also choose to pay a premium price for such a license in certain circumstances where continuity of the licensed product would outweigh the premium cost of the license. The unavailability of these licenses or the necessity of agreeing to commercially unreasonable terms for such licenses could materially adversely affect our business, financial condition, operating results and cash flow.

Table of Contents

Certain software we use is from open source code sources, which, under certain circumstances, may lead to unintended consequences and, therefore, could materially adversely affect our business, financial condition, operating results and cash flow.

We use open source software in our services, including our advanced mobile payment platform and smart ticketing platform, and we intend to continue to use open source software in the future. From time to time, there have been claims challenging the ownership of open source software against companies that incorporate open source software into their products or alleging that these companies have violated the terms of an open source license. As a result, we could be subject to lawsuits by parties claiming ownership of what we believe to be open source software or alleging that we have violated the terms of an open source license. Litigation could be costly for us to defend, have a negative effect on our operating results and financial condition or require us to devote additional research and development resources to change our solutions. In addition, if we were to combine our proprietary software solutions with open source software in certain manners, we could, under certain open source licenses, be required to publicly release the source code of our proprietary software solutions. If we inappropriately use open source software, we may be required to re-engineer our solutions, discontinue the sale of our solutions, release the source code of our proprietary software to the public at no cost or take other remedial actions. There is a risk that open source licenses could be construed in a way that could impose unanticipated conditions or restrictions on our ability to commercialize our solutions, which could adversely affect our business, operating results and financial condition.

Our business and operating results could be harmed if we undertake any restructuring activities.

From time to time, we may undertake restructurings of our business, including discontinuing certain products, services and technologies and planned reductions in force. There are several factors that could cause restructurings to have adverse effects on our business, financial condition and results of operations. These include potential disruption of our operations, the development of our technology, the deliveries to our customers and other aspects of our business. Loss of sales, service and engineering talent, in particular, could damage our business. Any restructuring would require substantial management time and attention and may divert management from other important work. Employee reductions or other restructuring activities also would cause us to incur restructuring and related expenses such as severance expenses. Moreover, we could encounter delays in executing any restructuring plans, which could cause further disruption and additional unanticipated expense.

Problems with our information systems could interfere with our business and could adversely impact our operations.

We rely on our information systems and those of third parties for fulfilling licensing and contractual obligations, processing customer orders, delivering products, providing services and support to our customers, billing and tracking our customer orders, performing accounting operations and otherwise running our business. If our systems fail, our disaster and data recovery planning and capacity may prove insufficient to enable timely recovery of important functions and business records. Any disruption in our information systems and those of the third parties upon whom we rely could have a significant impact on our business. Additionally, our information systems may not support new business models and initiatives and significant investments could be required in order to upgrade them. For example, in connection with our adoption of the New Revenue Standard, we plan to augment our systems with new revenue accounting software, utilizing internal and third party resources. Delays in adapting our information systems to address new business models and accounting standards could limit the success or result in the failure of such initiatives and impair the effectiveness of our internal controls. Even if we do not encounter these adverse effects, the implementation of these enhancements may be much more costly than we anticipated. If we are unable to successfully implement the information systems enhancements as planned, our operating results could be negatively impacted.

Risks Related to Capitalization Matters and Corporate Governance

The price of our common stock may continue to fluctuate.

Our common stock is listed on The NASDAQ Global Select Market under the symbol “RMBS.” The trading price of our common stock has at times experienced price volatility and may continue to fluctuate significantly in response to

various factors, some of which are beyond our control. Some of these factors include:

- any progress, or lack of progress, real or perceived, in the development of products that incorporate our innovations and technology companies' acceptance of our products, including the results of our efforts to expand into new target markets;
- our signing or not signing new licenses and the loss of strategic relationships with any customer;
- announcements of technological innovations or new products by us, our customers or our competitors;
- changes in our strategies, including changes in our licensing focus and/or acquisitions of companies with business models or target markets different from our own;
- positive or negative reports by securities analysts as to our expected financial results and business developments;

Table of Contents

- developments with respect to patents or proprietary rights and other events or factors;
- new litigation and the unpredictability of litigation results or settlements;
- repurchases of our common stock on the open market, including the rate of any such repurchases;
- issuance of additional securities by us, including in acquisitions; and
- changes in accounting pronouncements, including implementation of the New Revenue Standard.

In addition, the stock market in general, and prices for companies in our industry in particular, have experienced extreme volatility that often has been unrelated to the operating performance of such companies. These broad market and industry fluctuations may adversely affect the price of our common stock, regardless of our operating performance.

We have outstanding senior convertible notes in an aggregate principal amount totaling $172.5 million. Because these notes are convertible into shares of our common stock, volatility or depressed prices of our common stock could have a similar effect on the trading price of such notes. In addition, the existence of these notes may encourage short selling in our common stock by market participants because the conversion of the notes could depress the price of our common stock.

We have been party to, and may in the future be subject to, lawsuits relating to securities law matters which may result in unfavorable outcomes and significant judgments, settlements and legal expenses which could cause our business, financial condition and results of operations to suffer.

We and certain of our current and former officers and directors, as well as our current auditors, were subject from 2006 to 2011 to several stockholder derivative actions, securities fraud class actions and/or individual lawsuits filed in federal court against us and certain of our current and former officers and directors. The complaints generally alleged that the defendants violated the federal and state securities laws and stated state law claims for fraud and breach of fiduciary duty. Although to date these complaints have either been settled or dismissed, the amount of time to resolve any future lawsuits is uncertain, and these matters could require significant management and financial resources. Unfavorable outcomes and significant judgments, settlements and legal expenses in litigation related to any future securities law claims could have material adverse impacts on our business, financial condition, results of operations, cash flows and the trading price of our common stock.

We are leveraged financially, which could adversely affect our ability to adjust our business to respond to competitive pressures and to obtain sufficient funds to satisfy our future research and development needs, to protect and enforce our intellectual property, and to meet other needs.

We have material indebtedness. In November 2017, we issued $172.5 million aggregate principal amount of our 2023 Notes, the entire amount of which remains outstanding. The degree to which we are leveraged could have negative consequences, including, but not limited to, the following:

- we may be more vulnerable to economic downturns, less able to withstand competitive pressures and less flexible in responding to changing business and economic conditions;
- our ability to obtain additional financing in the future for working capital, capital expenditures, acquisitions, litigation, general corporate or other purposes may be limited;
- a substantial portion of our cash flows from operations in the future may be required for the payment of interest and principal when due at maturity in February 2023; and
- we may be required to make cash payments upon any conversion of the 2023 Notes, which would reduce our cash on hand.

A failure to comply with the covenants and other provisions of our debt instruments could result in events of default under such instruments, which could permit acceleration of all of our outstanding 2023 Notes. Any required repurchase of the 2023 Notes as a result of a fundamental change or acceleration of the 2023 Notes would reduce our cash on hand such that we would not have those funds available for use in our business.

If we are at any time unable to generate sufficient cash flows from operations to service our indebtedness when payment is due, we may be required to attempt to renegotiate the terms of the instruments relating to the indebtedness, seek to refinance all or a portion of the indebtedness or obtain additional financing. There can be no assurance that we will be able to successfully renegotiate such terms, that any such refinancing would be possible or that any additional

financing could be obtained on terms that are favorable or acceptable to us.

Compliance with changing regulation of corporate governance and public disclosure may result in additional expenses.

Changing laws, regulations and standards relating to corporate governance and public disclosure have historically created uncertainty for companies such as ours. Any new or changed laws, regulations and standards are subject to varying interpretations due to their lack of specificity, and as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies. This could result in continuing uncertainty regarding compliance

Table of Contents

matters and higher costs necessitated by ongoing revisions to disclosure and governance practices.

Our certificate of incorporation and bylaws, Delaware law, our outstanding convertible notes and certain other agreements contain provisions that could discourage transactions resulting in a change in control, which may negatively affect the market price of our common stock.

Our certificate of incorporation, our bylaws and Delaware law contain provisions that might enable our management to discourage, delay or prevent a change in control. In addition, these provisions could limit the price that investors would be willing to pay in the future for shares of our common stock. Pursuant to such provisions:

- our board of directors is authorized, without prior stockholder approval, to create and issue preferred stock, commonly referred to as "blank check" preferred stock, with rights senior to those of common stock, which means that a stockholder rights plan could be implemented by our board;
- our board of directors is staggered into two classes, only one of which is elected at each annual meeting;
- stockholder action by written consent is prohibited;
- nominations for election to our board of directors and the submission of matters to be acted upon by stockholders at a meeting are subject to advance notice requirements;
- certain provisions in our bylaws and certificate of incorporation such as notice to stockholders, the ability to call a stockholder meeting, advance notice requirements and action of stockholders by written consent may only be amended with the approval of stockholders holding 66 2/3% of our outstanding voting stock;
- our stockholders have no authority to call special meetings of stockholders; and
- our board of directors is expressly authorized to make, alter or repeal our bylaws.

We are also subject to Section 203 of the Delaware General Corporation Law, which provides, subject to enumerated exceptions, that if a person acquires 15% or more of our outstanding voting stock, the person is an "interested stockholder" and may not engage in any "business combination" with us for a period of three years from the time the person acquired 15% or more of our outstanding voting stock.

Certain provisions of our outstanding Notes could make it more difficult or more expensive for a third party to acquire us. Upon the occurrence of certain transactions constituting a fundamental change, holders of such Notes will have the right, at their option, to require us to repurchase, at a cash repurchase price equal to 100% of the principal amount plus accrued and unpaid interest on such Notes, all or a portion of their Notes. We may also be required to increase the conversion rate of such Notes in the event of certain fundamental changes.

Unanticipated changes in our tax rates or in the tax laws and regulations could expose us to additional income tax liabilities which could affect our operating results and financial condition.

We are subject to income taxes in both the United States and various foreign jurisdictions. Significant judgment is required in determining our worldwide provision for income taxes and, in the ordinary course of business, there are many transactions and calculations where the ultimate tax determination is uncertain. Our effective tax rate could be adversely affected by changes in the mix of earnings in countries with differing statutory tax rates, changes in the valuation of deferred tax assets and liabilities, changes in tax laws and regulations as well as other factors. Our tax determinations are regularly subject to audit by tax authorities and developments in those audits could adversely affect our income tax provision, and we are currently undergoing such audits of certain of our tax returns. Although we believe that our tax estimates are reasonable, the final determination of tax audits or tax disputes may be different from what is reflected in our historical income tax provisions which could affect our operating results.

Litigation, Regulation and Business Risks Related to our Intellectual Property

Adverse litigation results could affect our business.

We may be subject to legal claims or regulatory matters involving consumer, stockholder, employment, competition, intellectual property and other issues on a global basis. Litigation can be lengthy, expensive and disruptive to our operations, and results cannot be predicted with certainty. An adverse decision could include monetary damages or, in cases for which injunctive relief is sought, an injunction prohibiting us from manufacturing or selling one or more of our products or technologies. If we were to receive an unfavorable ruling on a matter, our business, operating results or financial condition could be materially harmed.

58

Table of Contents

We have in the past, and may in the future, become engaged in litigation stemming from our efforts to protect and enforce our patents and intellectual property and make other claims, which could adversely affect our intellectual property rights, distract our management and cause substantial expenses and declines in our revenue and stock price.
We seek to diligently protect our intellectual property rights and will continue to do so. While we are not currently involved in intellectual property litigation, any future litigation, whether or not determined in our favor or settled by us, would be expected to be costly, may cause delays applicable to our business (including delays in negotiating licenses with other actual or potential customers), would be expected to discourage future design partners, would tend to impair adoption of our existing technologies and would divert the efforts and attention of our management and technical personnel from other business operations. In addition, we may be unsuccessful in any litigation if we have difficulty obtaining the cooperation of former employees and agents who were involved in our business during the relevant periods related to our litigation and are now needed to assist in cases or testify on our behalf. Furthermore, any adverse determination or other resolution in litigation could result in our losing certain rights beyond the rights at issue in a particular case, including, among other things: our being effectively barred from suing others for violating certain or all of our intellectual property rights; our patents being held invalid or unenforceable or not infringed; our being subjected to significant liabilities; our being required to seek licenses from third parties; our being prevented from licensing our patented technology; or our being required to renegotiate with current customers on a temporary or permanent basis.
From time to time, we are subject to proceedings by government agencies that may result in adverse determinations against us and could cause our revenue to decline substantially.
An adverse resolution by or with a governmental agency could result in severe limitations on our ability to protect and license our intellectual property, and could cause our revenue to decline substantially. Third parties have and may attempt to use adverse findings by a government agency to limit our ability to enforce or license our patents in private litigations, to challenge or otherwise act against us with respect to such government agency proceedings.

Further, third parties have sought and may seek review and reconsideration of the patentability of inventions claimed in certain of our patents by the U.S. Patent and Trademark Office (“USPTO”) and/or the European Patent Office (the “EPO”). Any re-examination proceedings may be reviewed by the USPTO's Patent Trial and Appeal Board (“PTAB”). The PTAB and the related former Board of Patent Appeals and Interferences have previously issued decisions in a few cases, finding some challenged claims of Rambus' patents to be valid, and others to be invalid. Decisions of the PTAB are subject to further USPTO proceedings and/or appeal to the Court of Appeals for the Federal Circuit. A final adverse decision, not subject to further review and/or appeal, could invalidate some or all of the challenged patent claims and could also result in additional adverse consequences affecting other related U.S. or European patents, including in any intellectual property litigation. If a sufficient number of such patents are impaired, our ability to enforce or license our intellectual property would be significantly weakened and could cause our revenue to decline substantially.

The pendency of any governmental agency acting as described above may impair our ability to enforce or license our patents or collect royalties from existing or potential customers, as any litigation opponents may attempt to use such proceedings to delay or otherwise impair any pending cases and our existing or potential customers may await the final outcome of any proceedings before agreeing to new licenses or to paying royalties.

Litigation or other third-party claims of intellectual property infringement could require us to expend substantial resources and could prevent us from developing or licensing our technology on a cost-effective basis.
Our research and development programs are in highly competitive fields in which numerous third parties have issued patents and patent applications with claims closely related to the subject matter of our programs. We have also been named in the past, and may in the future be named, as a defendant in lawsuits claiming that our technology infringes upon the intellectual property rights of third parties. As we develop additional products and technology, we may face claims of infringement of various patents and other intellectual property rights by third parties. In the event of a

third-party claim or a successful infringement action against us, we may be required to pay substantial damages, to stop developing and licensing our infringing technology, to develop non-infringing technology, and to obtain licenses, which could result in our paying substantial royalties or our granting of cross licenses to our technologies. We may not be able to obtain licenses from other parties at a reasonable cost, or at all, which could cause us to expend substantial resources, or result in delays in, or the cancellation of, new products. Moreover, customers and/or suppliers of our products may seek indemnification for alleged infringement of intellectual property rights. We could be liable for direct and consequential damages and expenses including attorneys' fees. A future obligation to indemnify our customers and/or suppliers may harm our business, financial condition and operating results.

59

Table of Contents

If we are unable to protect our inventions successfully through the issuance and enforcement of patents, our operating results could be adversely affected.

We have an active program to protect our proprietary inventions through the filing of patents. There can be no assurance, however, that:

- any current or future U.S. or foreign patent applications will be approved and not be challenged by third parties;
- our issued patents will protect our intellectual property and not be challenged by third parties;
- the validity of our patents will be upheld;
- our patents will not be declared unenforceable;
- the patents of others will not have an adverse effect on our ability to do business;
- Congress or the U.S. courts or foreign countries will not change the nature or scope of rights afforded patents or patent owners or alter in an adverse way the process for seeking or enforcing patents;
- changes in law will not be implemented, or changes in interpretation of such laws will occur, that will affect our ability to protect and enforce our patents and other intellectual property;
- new legal theories and strategies utilized by our competitors will not be successful;
- others will not independently develop similar or competing chip interfaces or design around any patents that may be issued to us; or
- factors such as difficulty in obtaining cooperation from inventors, pre-existing challenges or litigation, or license or other contract issues will not present additional challenges in securing protection with respect to patents and other intellectual property that we acquire.

If any of the above were to occur, our operating results could be adversely affected.

Furthermore, recent patent reform legislation, such as the Leahy-Smith America Invents Act, could increase the uncertainties and costs surrounding the prosecution of any patent applications and the enforcement or defense of our licensed patents. The federal courts, the USPTO, the Federal Trade Commission, and the U.S. International Trade Commission have also recently taken certain actions and issued rulings that have been viewed as unfavorable to patentees. While we cannot predict what form any new patent reform laws or regulations may ultimately take, or what impact recent or future reforms may have on our business, any laws or regulations that restrict or negatively impact our ability to enforce our patent rights against third parties could have a material adverse effect on our business.

In addition, our patents will continue to expire according to their terms, with expiration dates ranging from 2018 to 2038. Our failure to continuously develop or acquire successful innovations and obtain patents on those innovations could significantly harm our business, financial condition, results of operations, or cash flows.

Our inability to protect and own the intellectual property we create would cause our business to suffer.

We rely primarily on a combination of license, development and nondisclosure agreements, trademark, trade secret and copyright law and contractual provisions to protect our non-patentable intellectual property rights. If we fail to protect these intellectual property rights, our customers and others may seek to use our technology without the payment of license fees and royalties, which could weaken our competitive position, reduce our operating results and increase the likelihood of costly litigation. The growth of our business depends in part on the use of our intellectual property in the products of third party manufacturers, and our ability to enforce intellectual property rights against them to obtain appropriate compensation. In addition, effective trade secret protection may be unavailable or limited in certain foreign countries. Although we intend to protect our rights vigorously, if we fail to do so, our business will suffer.

Effective protection of trademarks, copyrights, domain names, patent rights, and other intellectual property rights is expensive and difficult to maintain, both in terms of application and maintenance costs, as well as the costs of defending and enforcing those rights. The efforts we have taken to protect our intellectual property rights may not be sufficient or effective. Our intellectual property rights may be infringed, misappropriated, or challenged, which could result in them being narrowed in scope or declared invalid or unenforceable. In addition, the laws or practices of certain countries do not protect our proprietary rights to the same extent as do the laws of the United States. Significant impairments of our intellectual property rights, and limitations on our ability to assert our intellectual

property rights against others, could have a material and adverse effect on our business.

Third parties may claim that our products or services infringe on their intellectual property rights, exposing us to litigation that, regardless of merit, may be costly to defend.

60

Table of Contents

Our success and ability to compete are also dependent upon our ability to operate without infringing upon the patent, trademark and other intellectual property rights of others. Third parties may claim that our current or future products or services infringe upon their intellectual property rights. Any such claim, with or without merit, could be time consuming, divert management's attention from our business operations and result in significant expenses. We cannot assure you that we would be successful in defending against any such claims. In addition, parties making these claims may be able to obtain injunctive or other equitable relief affecting our ability to license the products that incorporate the challenged intellectual property. As a result of such claims, we may be required to obtain licenses from third parties, develop alternative technology or redesign our products. We cannot be sure that such licenses would be available on terms acceptable to us, if at all. If a successful claim is made against us and we are unable to develop or license alternative technology, our business, financial condition, operating results and cash flows could be materially adversely affected.

We rely upon the accuracy of our customers' recordkeeping, and any inaccuracies or payment disputes for amounts owed to us under our licensing agreements may harm our results of operations.

Many of our license agreements require our customers to document the manufacture and sale of products that incorporate our technology and report this data to us on a quarterly basis. While licenses with such terms give us the right to audit books and records of our customers to verify this information, audits rarely are undertaken because they can be expensive, time consuming, and potentially detrimental to our ongoing business relationship with our customers. Therefore, we typically rely on the accuracy of the reports from customers without independently verifying the information in them. Our failure to audit our customers' books and records may result in our receiving more or less royalty revenue than we are entitled to under the terms of our license agreements. If we conduct royalty audits in the future, such audits may trigger disagreements over contract terms with our customers and such disagreements could hamper customer relations, divert the efforts and attention of our management from normal operations and impact our business operations and financial condition.

Any dispute regarding our intellectual property may require us to indemnify certain customers, the cost of which could severely hamper our business operations and financial condition.

In any potential dispute involving our patents or other intellectual property, our customers could also become the target of litigation. While we generally do not indemnify our customers, some of our agreements provide for indemnification, and some require us to provide technical support and information to a customer that is involved in litigation involving use of our technology. In addition, we may be exposed to indemnification obligations, risks and liabilities that were unknown at the time of acquisitions, including with respect to our acquisitions of SCS, the assets of the Snowbush IP group and the Memory Interconnect Business, and we may agree to indemnify others in the future. Any of these indemnification and support obligations could result in substantial and material expenses. In addition to the time and expense required for us to indemnify or supply such support to our customers, a customer's development, marketing and sales of licensed semiconductors, lighting, mobile communications and data security technologies could be severely disrupted or shut down as a result of litigation, which in turn could severely hamper our business operations and financial condition as a result of lower or no royalty payments.

Table of Contents

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds
Share Repurchase Program
On January 21, 2015, our Board approved a share repurchase program authorizing the repurchase of up to an aggregate of 20.0 million shares. Share repurchases under the plan may be made through the open market, established plans or privately negotiated transactions in accordance with all applicable securities laws, rules, and regulations. There is no expiration date applicable to the plan. As part of the broader share repurchase program previously authorized by our Board on January 21, 2015, we initiated an accelerated share repurchase program with Citibank, N.A. on March 5, 2018 which was completed in the second quarter of 2018. After giving effect to such accelerated share repurchase program, detailed in the table below, we had remaining authorization to repurchase approximately 3.6 million shares.
We record stock repurchases as a reduction to stockholders' equity. We record a portion of the purchase price of the repurchased shares as an increase to accumulated deficit when the price of the shares repurchased exceeds the average original proceeds per share received from the issuance of common stock.

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Number of Shares that May Yet be Purchased Under the Plans or Programs
Cumulative shares repurchased as of December 31, 2017	12,565,372	$11.94	12,565,372	7,434,628
January 1, 2018 - March 31, 2018 (1)	3,117,693	$13.21	3,117,693	4,316,935
April 1, 2018 - June 30, 2018 (1)	667,653	$13.21	667,653	3,649,282
Cumulative shares repurchased as of September 30, 2018	16,350,718		16,350,718	

(1) In the first quarter of 2018, we entered into an accelerated share repurchase program with Citibank, N.A. to repurchase an aggregate of $50.0 million of our common stock. We made an upfront payment of $50.0 million pursuant to the accelerated share repurchase program and received an initial delivery of 3.1 million shares which were retired and recorded as a $40.0 million reduction to stockholders' equity. The remaining $10.0 million of the initial payment was recorded as a reduction to stockholders' equity as an unsettled forward contract indexed to our stock. During the second quarter of 2018, the accelerated share repurchase program was completed and we received an additional 0.7 million shares of our common stock, which were retired, as the final settlement of the accelerated share repurchase program. The total shares of our common stock received and retired under the terms of the accelerated share repurchase program were 3.8 million, with an average price paid per share of $13.21. See Note 12, "Stockholders' Equity," of Notes to Unaudited Condensed Consolidated Financial Statements of this Form 10-Q for further discussion.
Item 3. Defaults Upon Senior Securities
None.

Item 4. Mine Safety Disclosures
Not Applicable.

Item 5. Other Information
None.

Table of Contents

Item 6. Exhibits
INDEX TO EXHIBITS

Exhibit Number	Description of Document
10.1#	Employment Agreement between the Company and Luc Seraphin dated as of August 2, 2018.
10.2# (1)	Employment Agreement between the Company and Luc Seraphin dated as of October 25, 2018.
10.3# (2)	Amended and Restated Change of Control Severance Agreement between the Company and Luc Seraphin dated as of October 25, 2018.
31.1	Certification of Principal Executive Officer, pursuant to Rule 13a-14(a) and Rule 15d-14(a) of the Securities Exchange Act of 1934, as amended, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Principal Financial Officer, pursuant to Rule 13a-14(a) and Rule 15d-14(a) of the Securities Exchange Act of 1934, as amended, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1*	Certification of Principal Executive Officer, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2*	Certification of Principal Financial Officer, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document

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* The certifications furnished in Exhibit 32.1 and 32.2 hereto are deemed to accompany this Quarterly Report on Form 10-Q and will not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended. Such certifications will not be deemed to be incorporated by reference into any filings under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, except to the extent that the registrant specifically incorporates it by reference.

\# Indicates management contract.

(1) Incorporated by reference to Exhibit 10.1 of Form 8-K filed on October 29, 2018.

(2) Incorporated by reference to Exhibit 10.2 of Form 8-K filed on October 29, 2018.

SIGNATURE

63

Table of Contents

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

RAMBUS INC.

Date: November 2, 2018 By: /s/ Rahul Mathur
Rahul Mathur
Senior Vice President, Finance and Chief Financial Officer
(Principal Financial Officer and Duly Authorized Officer)